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THE CONTRIBUTION OF PRESCHOOL EDUCATION TO A PUBLIC SCHOOL SYSTEM[1]

CARLETON WASHBURNE and ROSE H. ALSCHULER

Superintendent of Schools and Staff Director of the Winnetka Nursery School Unit, Winnetka, Illinois

Within the past decade two important factors have modified educational thinking and procedure in many fields. These factors—mental hygiene and nursery schools—are frequently interlocked as they enter various departments of schools and colleges. There is a natural relationship between the two, for when we think in terms of mental hygiene, we usually consider early childhood as an important factor; and if we would think intelligently about young children, we must consider their psychological and emotional trends. In Winnetka for the past three years, we have had a nursery school as part of the public school system.

In immediate juxtaposition with the nursery school is the department of educational counsel, as the mental hygiene department is called. This in turn is partly staffed by the Institute for Juvenile Research in Chicago. The Institute has likewise been responsible for testing and evaluation of the nursery school children. It is beyond the scope of this article to describe the work of the department of educational counsel; but unless the reciprocal relationship between the work in mental hygiene and the nursery school work in Winnetka is recognized, much of the significance of the nursery school is lost. We find that the nursery school has a very real significance in the system and that its implications and potentialities are quite separate and beyond the immediate service it renders to a small number of children.

For the present, nursery schools in public school systems must be

[1] Based on an address delivered by Carleton Washburne at the meeting of the National Conference of Supervisors and Teachers of Home Economics at Atlantic City, February 25, 1930.

considered only as laboratories. This is true from the administrative point of view, because the per capita cost is relatively high (the number of children serviced in any given unit being small) and also because very little is known and agreed upon as to the best possible procedure for young children. However, accepted as laboratories servicing a limited number of children, nursery schools may have a dynamic influence in a school system and in a communtiy.

This influence may extend, as it does in Winnetka, to the children and families serviced directly, to other children of preschool age in the community, to their families, to general faculty members, to the school curriculum, to seventh and eighth grade boys and girls, and to the department of mental hygiene.

In the Winnetka nursery school unit there are three groups of children: the nursery school with sixteen 2 and 3 year olds, the junior kindergarten with sixteen 4 year olds, and the afternoon play group with fourteen children ranging from $2\frac{1}{2}$ to $3\frac{1}{2}$ years of age. The nursery school meets daily from nine to three thirty; the junior kindergarten daily from nine to eleven thirty; and the afternoon play group meets two afternoons a week from two thirty to four fifteen. With all of these groups a good deal of thought and time is given to consideration of individual cases and to conferences with parents. Periodically all parents receive written reports. In these, height, weight, and general condition are recorded; status of behavior and problems, if there are any, are noted; and procedures that have been tried and found helpful are recommended.

As a laboratory the nursery school renders service to little children not only in attendance at one of the nursery school units, but also throughout the entire community. For each thing that is discovered in the nursery school can be made available to parents outside, and through them to their children. Let us cite two or three examples:

The songs suitable to children of preschool age have been given considerable thought by the entire preschool group. This preschool group consists not only of the nursery school teachers, but also of the Winnetka kindergarten teachers and the teachers of the "connecting first grades" —a transition grade between kindergarten and first grade. This entire group meets fortnightly with the staff director of the nursery school unit and the superintendent of schools for discussion of curriculum, methods, and research. During the fall of the current year it revised a list that had been previously prepared of songs suitable to children at the various ages. Pooled judgment of the group, based as far as possible upon experience, was used in making the tentative list. This list was

submitted to authorities on preschool music and music in general—men like Zanzig and Surette. Their suggestions were then carefully considered and a revised list prepared. During the course of the year the nine preschool teachers, with children ranging from two to six years of age, tried out these songs with their children and watched their responses. At the close of school a check was made as to the degree of liking manifested by the children for the different songs, the frequency with which the songs were called for by the children, and the judgment of the teachers as to their suitability. These facts have been recorded and will be kept to compare with similar facts gathered from new groups of children next year. The cooperation of other nursery school and preschool units will probably be secured next year in an attempt to prepare an adequate and carefully checked list of songs suitable to little children.

Such a list of songs can be and will be, when it is validated, distributed to the mothers of the entire community, together with information as to where to get the necessary books to use in singing and playing these songs for their children.

A similar study is under way in regard to the stories and picture books most suitable for children at different age levels. When completed, these lists, too, will be made available to the parents of the entire community.

A much more elaborate study of children's interests in play materials is being conducted in the Winnetka preschool group by Dr. Dorothy Van Alstyne, research psychologist. The exact amount of time spent by children of different ages in playing with different materials, the amount of socialization involved, the frequency with which materials are used, and various other factors, are being made part of a study which should furnish a useful guide, not only to our own nursery school, but to parents in the home, as to what kinds of materials will be most valuable and most interesting to preschool children.

A further service to parents is planned in connection with the habits that can be expected of little children at different ages, as determined by research already conducted in several nursery schools. As a result of the dissemination of this information parents may modify their home procedure in the light of the laboratory findings of the nursery school.

Through such studies, to be followed by bulletins and also frequent conferences with parents, it is hoped that the nursery school influence may spread itself throughout the homes of Winnetka, enabling mothers to

give children of preschool age a more adequate preparation for adjusted, well-balanced, happy, and healthy lives.

In addition to these values to parents and little children, the nursery school as part of a public school system serves as a source of information and stimulus to teachers. Some student teachers work in the nursery school itself. During their period of practice teaching an attempt is made to give them a philosophical approach along with the every day technics. The point made earlier in this article of the close inter-relationship between school behavior and home personnel and atmosphere is stressed. An attempt is made to have student teachers realize that in order to teach a child successfully, one should have an insight into his family situation. Rather accurate and full records are kept; these are not only valuable for teacher training, but are used as guide posts for the nursery school teachers themselves, and in time they should yield valuable data in the physical and psychological research fields.

All Winnetka kindergarten and primary teachers are expected to spend some time each year visiting the nursery school. The nursery school having developed free from philosophic preconceptions or academic requirements, is more advanced psychologically, more truly in keeping with the needs of the child than is the usual kindergarten or primary grade. There is a stimulus and challenge to the lower grade teachers in watching the handling and development of these very young children.

It is not an accident that the nursery school in Winnetka is located in the junior high school building. One of its important functions in a public school system is pre-parental training. The pre-parental work in Winnetka is still in its infancy as far as the full utilization of the nursery school is concerned. Already, however, one can usually find two or three seventh and eighth grade girls in the nursery school, observing the children, recording their activities, or helping with luncheon preparation. They often remain and have luncheon with the little children. An effort is made to give these girls an understanding attitude toward family life and toward simple problems of the general care, nutrition, and behavior of young children. Similarly, the boys in the shop department have made wagons for the nursery school children and small pairs of parallel bars; they have repaired apparatus, and have just completed a quite delightful tree-house in the play yard of the nursery school.

Pre-parental education in the Skokie (junior high) School in Winnetka at present consists of home economics, shop work and home mechanics, home nursing, and a course in biology and physiology, which includes unusually complete sex instruction. It is planned to prepare a systema-

tic course which will unify all these separate courses, centering the work of the various departments in preparation for home and family life. For this new course the nursery school will be the center. The various courses will culminate in actual work for little children.

A case of the inter-working of departments, and of home and school might here be cited. Sonita, aged three and one-half, was having a good deal of friction with her adopted brother, aged thirteen. The nursery school staff thought a closer and friendlier attitude needed to be built up between the children. Accordingly, the boy was called in and told that the nursery school needed some wooden puzzle pictures. He was asked to make them for his sister to bring to school. It became a sort of family project. Everyone in the family looked for usable pictures. The common objective was helpful, and the consideration of the children for each other was increased. Conferences were held with the parents; their point of view as well as the children's was helped. The friction seems to be disappearing through the re-direction of energy. While the type of work that this kind of teaching involves, perhaps increases the volume of work for the teacher, it makes her job a decidedly more interesting one.

Another potentially important phase of the place of the nursery school within a school system is the opportunity it offers for long-time studies of children. Our knowledge about the growth and development of human beings should be greatly enhanced by this opportunity for continuous study of children through observation and records over a period of years. With this in mind, the Winnetka nursery school immediately adjoins the department of educational counsel (mental hygiene), and all nursery school records are made available to that department. In future years these records should prove invaluable.

In this paper we have touched on some of the opportunities a nursery school unit offers the public school system. There are others of which time and space do not permit mention, and there are doubtless as many more that we have not yet perceived; for the field of the nursery school is practically at the beginning of cultivation—with the harvest a long way ahead.

HOW TO INTEREST MEN AND WOMEN IN NUTRITION

LUCY A. CASE

Extension Specialist in Nutrition, Oregon State Agricultural College, Corvallis

The question of how to interest men and women in nutrition may be analyzed in several ways. Making our approach from the point of view of the psychology of interest, we recall John Dewey's definition:

> The genuine principle of interest is the principle of the recognized identity of the fact or proposed line of action with the self; that it lies in the line of the agent's own growth, and is, therefore, imperiously demanded, if the agent is to be himself. Let this condition of identification once be secured, and we neither have to appeal to sheer strength of will, nor do we have to occupy ourselves with making things interesting.

Applying this principle to our problem of interesting a person in nutrition, our task is to show him how the facts of nutrition affect his most intimate daily living, his work, his achievements, his comforts, his pleasures, his finances, all of the things that most commonly occupy his consciousness not only today but also for the future; to show him how the line of action which he follows in regard to it will continue to affect his life constantly and be a molding force in the realization of his most personal hopes, plans, and ideals.

Further, Dewey says that the nature of interest is threefold: active, objective, and subjective. "To be interested in any matter is to be actively concerned with it." That is, to interest men and women in nutrition, we must give them some active work to do. "Second, it is objective. Interest does not end simply in itself, as bare feelings may, but always has some object, end or aim to which it attaches itself." Applied to our problem, men and women must be given a clear object or aim in view in order to hold their interest. "Third, interest is subjective; it signifies an internal realization, or feeling, of worth. It has its emotional as well as its active and objective sides." That is, to maintain the interest of men and women in nutrition, they must be made to respond emotionally to the recognized worth of the vital truths of the subject.

A slightly different approach to the problem of interesting people in nutrition is to apply to it some of the principles of salesmanship. When you go into a community to interest the men and women in nutrition, it may be said that you have to "sell your subject." Norval A. Hawkins, successful salesman and author, gives the following outline of procedure for salesmanship: First, sell yourself to the proposition, and stay sold on it. The nutrition worker, then must thoroughly believe in the vital importance of her subject before she can interest people in it. And she

must constantly maintain this faith, with no weakening. The second factor in salesmanship is to have a thorough, comprehensive knowledge of many details. We must know our subject. The third is the salesperson himself. All the desirable qualities of character and fitness for the job enter into this consideration. A nutrition worker who shows the signs of good nutrition and health herself will, of course, secure more interest in the subject than one who does not look and act healthy and vigorous. The fourth factor in salesmanship is the effective use of knowledge. We must know how to present the advantages of our projects so vividly that the listener will be impelled to favorable action. Other steps in salesmanship that have their counterpart in interesting men and women in nutrition are sizing up the buyer, gaining attention, handling objections, securing decision, and the "get-away" and lead to future orders.

When it comes to applying these principles to the giving of a nutrition talk to an audience of men and women, we realize that beginnings and first impressions are very important in securing interest. The way in which to start the talk depends upon what has gone before—what other subjects, if any, have been discussed, what the other speakers were like and what they said, how the chairman of the meeting has introduced the nutrition speaker, the kind of audience, the time of day, how tired the people are, whether children are present and, if so, how they are behaving, and the general atmosphere of the meeting. In other words, the nutrition speaker must first "size up the buyer."

Next she must gain attention. This can often be done by reference to something telling that has occurred at the meeting or by a good story.

The form of her talk may also aid in catching and holding attention. Clearness and simplicity of language add to interest. Avoid technical language unless speaking to a special audience that has learned its use. The writer once listened to an address by a nationally famous research worker where practically all of the audience "walked out on him" because he did not speak their language. When an unusual term is used, explain it in clear, simple words. An occasional touch of the narrative or the dramatic also stimulates interest, if not carried too far. The account of an actual occurrence will illustrate a point more effectively than a theoretical statement or plain admonition. The nutrition worker is constantly running into human comedy or tragedy, and she has only to go into a home or a restaurant to find a story that will help to develop interest. The Socratic method in a talk adds to interest if the group is not too large. Develop the subject by asking questions, and, if possible,

get the audience to show their reaction and response as you go along. This is particularly helpful in preventing them from going to sleep after a large community dinner, with the traditional 20 cakes and 25 pies, and all the rest.

In choosing illustrations to explain a subject, one must, of course, try to have them "pat"—clear, vivid, and forceful. Those drawn from the everyday lives of the group addressed are very effective. Showing especially fine individuals to represent the physical standard advocated, arouses interest. An audience is pleased with a fine baby or a well-grown child who can be pointed to as manifesting good physical growth. If real children are not available, use photographs of real people, perhaps outlining their story; the faces can be blocked out if it seems wise to avoid identification. Members of the audience may go home and compare their own children with what they have seen. Pictures of poorly developed children are good for contrast with the others.

Dr. Lydia Roberts in her book "Nutrition Work with Children" suggests that an exhibit of five ears of corn of varying degrees of perfection, from a nearly perfect ear at one end to a miserable nubbin at the other end, can be used to show that the same variations may hold true with children, and to interest parents in striving to bring their children not only above the nubbin but up to the best.

Self examination is always interesting. Set people at the meeting to comparing themselves with the standard. Friends can be paired off to help examine each other, and an interesting score card of credits and debits can be used. Have them look for such manifestations as clearness of skin, firmness of flesh and muscle, absence of circles under the eyes, a sweet breath, good posture, vigor, absence of headaches, nervousness, indigestion, tiring easily, catching cold easily, and also for good habits. Such health score cards, even though they are inaccurate, are valuable in making people think.

Since every normal person has some pride in appearance, interest may be gained by showing that nutrition often helps to improve the figure, the complexion, the posture, the poise, and even the effectiveness of the clothes one wears.

Interest can also be gained by appealing to parental affection. Underneath the sometimes careless exterior, the parent is usually tremendously interested in his children's welfare and ready to do anything possible if he honestly believes it is for the children's good. A father can be led even to eat carrots himself, although he dislikes them, in order to set a good example and to help his child to learn to eat carrots.

The parent takes more interest in both the nutrition talk and the project if he has personal confidence and respect for the nutrition worker. Confidence is built up in many ways, mostly by what a person does rather than by what he says. Live your project yourself daily. Show by your illustrations and methods that you understand your audience, their situation and difficulties. As simple a thing as picking up a baby properly may inspire a mother's confidence. The extension worker in nutrition is aided in interesting others by having had farm experience, matrimonial experience, and child training experience. She can gain the parents' interest by showing an understanding of their perplexing problems, and can help to point the way out.

As for the subject matter of the nutrition talk, statistics and figures often add to interest. Among the effective statistics available are those on longevity, number of defectives, and the effects of food habits as brought out by the war. Figures showing contrasts and comparisons of food values are interesting. Women gasp at being told that they would have to eat 150 apples in order to get the lime contained in a quart of milk, and they are still more interested if shown the pile of 150 apples.

Men and women on the farm are particularly interested by the lessons gained from the feeding of stock and poultry. Mrs. So and So from Jones' Corner breaks out with a statement that she wouldn't expect to raise chickens successfully without greens and milk, and this helps to make the meeting interesting.

Judging from the writer's experience, one of the most interesting phases of nutrition to men and women is its relation to their philosophy of life and mental habits. This subject comes up in connection with child training, control of nervousness, rest and relaxation, development of optimism and poise, and the effect of these factors on physiological processes. A favorite verse may be appreciated in this connection, such as the one starting:

> I wish I was a little stone a 'sittin' on a hill,
> With nothing else to do at all but jest sit still.

An interesting hour can be devoted to pricking the bubbles of food fads and superstitions and showing their lack of scientific basis. Give examples also of meaningless traditions and relate incidents showing common faults of diets—for example, the fat lady who alternated toast and jam with toast and jelly until she had eaten six slices for breakfast.

Humorous songs and stunts can sometimes be effectively used at nutrition meetings on the basis of improving digestion by a happy mental

attitude. Songs about foods teach lessons in an interesting way even to adults, and the adults are always interested in taking copies of such songs to school for the children to enjoy.

Remembering Dewey's emphasis on activity as a stimulus to interest, make home demonstrators of as many men and women as possible. Set clear, definite projects for them to work on, such as arranging the family meals according to score card, correction of underweight, drinking a quart of water daily, the supervised school lunch, standard growth of the baby. Show how some nutrition helps can be passed on to other people; people become more interested in a subject by having to tell it to others and by being of active service to others. Have them bring back reports and tell their accomplishments on achievement days. Imagine the pride of the little farm lady in Columbia County who, in connection with the discussion of the winter supply of vegetables, brought in an attractive basket containing nine different kinds of greens picked from her garden on December 15!

Most women take much interest in "something new and different." They will make more salads and milk dishes and wholesome sandwiches if they have new recipes to make them by. Don't have all the recipes printed. Dictate a few of the latest choice bits. The writer has seen over 500 women in a room, breathlessly leaning forward to catch every word of the cooking demonstrator as she dictated what they thought was a new recipe. One woman writes in: "Can you please send me another copy of the salad recipes? I have loaned mine to every woman in the community to copy and one of them has lost the set. But the sheets were worn to shreds from handling."

Gain interest by connecting up the nutrition program with the agricultural program. Include a liberal use of suitable local products in food demonstrations. Show the economic value of the year-round supply of home garden products, fruits, and dairy products. Have the county agent demonstrate such things as gardening and trapping, at the nutrition meetings.

Men often become interested in nutrition by the economic appeal. Show them that family expenses are kept down by good nutrition habits: that less money is paid out for groceries and sickness and dentist, that the vegetable garden is often the best paying plot on the farm and deserves a good supply of the fertilizer.

An important appeal to the interest of men and women in nutrition is the food demonstration and the community chicken dinner, which illustrate some phase of the nutrition work. Everybody enjoys good things

to eat. See that the food products at demonstrations are palatable and attractive in appearance. Have every woman—and every man, too, if he will, for he adds much interest—make some dish at the meeting which she never made before, and let them all eat the things which they have made and take home printed recipes to try out on the family. The community meal, planned by the nutrition group to meet nutrition requirements, is an excellent means of interesting both the local community and others. Many people come out to a meal who wouldn't otherwise, and then can be reached by the program, which should immediately follow the meal, before they "escape."

The private conference is another means of interesting men and women in nutrition. Get a woman to tell her story to you alone, with plenty of time if possible to draw her out, get her confidence, and outline clearly what help can be given. Show your interest and sympathy. In many cases, this is half the solution of the problem. Try to remember the particular case and inquire repeatedly on progress made. People are interested in those who are interested in them.

Perhaps a few things that often kill interest and "queer" the nutrition program should be mentioned.

Boasting that nutrition is a "cure-all"

Implying that nutrition knowledge is at present complete or final

Confusing the nutrition project by taking up other projects at the same time

Conflicting statements on nutrition from various agencies. The Oregon State Nutrition Council helps to solve this problem.

Narrow interpretation of height-weight-age schedules; not allowing margin from standard for type, heredity, etc.; sending home cut and dried notices that child is "over weight" when he is within 20 per cent of average weight

Meagerly trained nutrition worker, and inability to answer questions

Taking part in anti-nutrition practices, such as evening entertainments for children and giving recipes for candy sales at schools

Nagging, "preaching," and talking too long

If one avoids these pitfalls and instead tries to apply the recognized means of catching and holding attention, the subject of nutrition will be found rich in points that interest men and women.

THE TESTING OF MERCHANDISE BY DEPARTMENT STORES

EPHRAIM FREEDMAN

Bureau of Standards, R. H. Macy & Company, Inc., New York City

Three years ago manufacturers were busily engaged in turning out an almost endless variety of new articles in an effort to satisfy the cravings of a public who had plenty of money to spend. Production in many instances was hard put to keep up with consumption, and "standards" meant little. There was an ever-increasing demand for silk stockings, silk dresses of every conceivable color, color in the home and about the person, patterns of new and varied construction, proposed new uses for old materials and old uses for new; but there was little if anything of standards and but few guides with which to measure the efficiency of the goods.

Recognizing the need for the proper evaluation of merchandise, a number of stores have since established testing laboratories. The activities of some of these are quite different from that of the ordinary testing laboratory. Not alone do they compare competitive offerings of manufacturers in order to determine best values, but they are also charged with the problem of ascertaining the efficiency of merchandise in terms of performance under conditions incidental to their normal use. It is frequently necessary in order to ascertain the relative behavior of merchandise, to develop new methods of testing and new apparatus.

The investigations made in such laboratories include foods, drugs, textiles, umbrellas, paint-stuffs, house furnishings, sporting goods, hardware, stationery, jewelry, cosmetics, radio tubes, luggage, almost every conceivable type of merchandise.

Among the many specimens examined in one of these testing laboratories, the following may be mentioned as interesting because of the disclosures made:

1. A piece of cowhide masquerading as alligator skin
2. A reducing bath-powder (producing a milk-like bath) composed mostly of starch, to which small amounts of washing soda and borax were added
3. A marvelous liniment—capable of alleviating any pain and curing everything from a bruise to pneumonia and so wonderful that it locates deep-seated pains and brings them to the surface—which upon analysis turned out to be impure chloroform
4. Chopped and stripped chicken feathers, other feathers, and kapok, either alone or in combination, labeled and offered for sale as "down"

5. Second-hand batting used in mattresses purporting to be new
6. "Washable" articles of all types which faded, stained, or shrank excessively during the laundering process
7. "Borax-powdered soap" which was in reality a soap powder containing no borax whatsoever
8. "Sun-fast" curtains that faded almost immediately
9. Pony skin masquerading as galyak
10. Blankets, so weak in the filling direction as to cause the material to part under the least tension

The activities of these testing laboratories coupled with those of the National Bureau of Standards and of national and trade associations have had a very salutory effect upon the quality of merchandise. Though progress is not always as rapid as one might wish, gradual changes are noticeable, new standards are being evolved, specifications are being prepared, ambiguous and misleading terms are being tabooed, and the public is being informed more and more frequently as to what to expect in the way of performance and durability.

Among the standards (in many cases tentative) that have been evolved, may be mentioned those for silks, blankets, stationery, hosiery, clothing, soaps, sporting goods, pajamas, shirts, bedding materials, bathing suits, and mirrors.

The testing of washability has been reduced to a simple formula which describes in definite terms the type of soap, the temperature, and the method of drying and ironing. It includes shrinkage, setting a maximum limit of five per cent for woven materials.

The problems connected with the cleanliness and composition of materials entering into mattresses and pillows are of nation-wide importance. Several states already have passed laws to insure sanitary conditions in bedding offered for sale, and the passage of similar legislation by every state in the Union should be the subject of immediate activity on the part of state home economics associations.[1]

Another important problem involving the "warmth" of blankets and textile materials under conditions incidental to their use has recently been the subject of much research in the hope that it may be possible to tell by actual test how much warmer one blanket is than another.

The resistance to sun and rain, resistance to abrasion, slippage or displacement of warp threads, and the rapid deterioration of weighted silks are among the problems which have yet to be solved.

[1] See "Mattress Frauds and Laws," JOURNAL OF HOME ECONOMICS, Volume 16, pp. 581–582 (1924); and "Labels on Mattresses," Volume 22, August (1930), pp. 670–671.

Up to 1930, a marked general improvement in the quality of merchandise was noticeable. Since then, however, there has been a tendency in some directions to sacrifice quality for price. The question "What do you expect for the money?" is being heard again, and those who are lured on by lower prices will ofttimes find it a rather expensive proposition.

While some of these testing laboratories have been expanding, the activities of others are being curtailed, possibly because the laboratory is still being considered in many quarters as a liability rather than as an asset; or more likely, because the problems are not tackled from the consumer's point of view, the investigators going off at a tangent leading to the opposite camp.

Now, more than ever, there is a need for the testing laboratory oper ated in the interests of the final users of the goods. It should be remembered that the current demand for "cheaper" merchandise is really a demand for merchandise which is less expensive but of which the wearing qualities have not been impaired. This legitimate demand can only be satisfied by careful and systematic examination of offerings and shipments; by constructive interchange of views between organizations representing the manufacturer, the retailer, and the consumer; by continued research of the problems affecting the behavior of and care given to merchandise after being placed in the hands of the consumer; and by the creation and maintenance of standards.

LAUNDRY TIME COSTS

MAUD WILSON

Oregon Experiment Station, Corvallis

The clothes line is not falling into disuse in Oregon households, judging from the representative group from which records were secured for our study of the "Use of Time by Homemakers." In 99 per cent of these households, some time was spent in laundry work during the weeks recorded. In only 5 per cent of the farm households and 15 per cent of those not on farms, was there any laundry sent out at all (excepting men's collars) during the week recorded.

Data used in this study consisted of 547 records kept during "typical" weeks of household activity. Three hundred and eleven of these records were from farm households. Of the rest, 72 came from country homes where the chief source of income was some occupation other than farming, and 69 came from villages. All cooperators lived in detached

TABLE 1

Average time spent per week by all workers in farm and non-farm households in all homemaking tasks, in meals and daily and weekly cleaning, and in regular laundry work

ACTIVITY	311 FARM HOUSEHOLDS		236 NON-FARM HOUSEHOLDS	
	hours	*minutes*	*hours*	*minutes*
All homemaking	61	28	63	22
Meals and cleaning	34	20	32	05
Regular laundry	6	17	6	31
Washing	4	03	3	44
Ironing	2	14	2	47

dwellings. Each record consisted of a diary kept by the homemaker, a summary of help received in household operations, and information concerning the size and composition of the household and the conditions of work. The study is part of one undertaken in cooperation with the Bureau of Home Economics of the United States Department of Agriculture.

Laundry work accounted for 10 per cent of the total time cost of operating the average household or almost a quarter of the time left after work on meals and routine cleaning were done, as is shown in table 1.

The customary way of caring for laundry is to "do it up" every week. As is shown by table 2, in 70 per cent of the farm households and in 67 per cent of those not on farms, the laundry done during this "typical" week was one week's complete collection, both for washing and ironing,

and included no extra pieces such as bedding or curtains. Laundry work seldom required more than 10 or less than 4 hours a week.

As might be expected, the time given to washing increased with the number of persons for whom it was done. The rate of increase, however, was low, as tables 3 and 4 show. Ironing time increased even less than washing; but the amount of laundry which was put away without ironing was greater in the larger households. Where laundry work was done for 2 persons, all of it, except small flat things, was ironed in 68 per cent of the farm households; where laundry work was done for 6 persons or more, only 43 per cent of our farm cooperators reported that they ironed everything except the small flat things.

TABLE 2

Farm and non-farm households grouped according to time spent in doing one week's laundry work

TIME SPENT ON VARIOUS PROCESSES	FARM HOUSEHOLDS		NON-FARM HOUSEHOLDS	
	Number of records	Found in group	Number of records	Found in group
		per cent		*per cent*
Washing	243		166	
Less than 2 hours		5.3		9.6
2 and less than 6 hours		85.6		77.1
6 hours or more		9.1		13.3
Ironing	218		159	
Less than 1 hour		6.0		5.0
1 to 4 hours		85.3		76.7
4 hours or more		8.7		18.3
Washing and ironing	218		159	
Less than 4 hours		8.7		10.7
4 to 10 hours		84.9		76.1
10 hours or more		6.4		13.2

Time given to laundry work for more than 2 persons is compared in table 4 with that required for the two. Time required for washing was greater where a baby was among the persons for whom it was done.

Not many of our cooperators had paid help for laundry work; but where they did, the total time cost per person was greater than in households where it was done entirely by unpaid workers. The households having paid help in laundry averaged slightly larger than others.

It is interesting to note that homemakers who had paid help in the household used over twice as much of it for ironing as for washing. Twenty-one of the non-farm households in which the laundry amounted to one week's collection, employed some household labor—an average of 17.2 hours each—and of this paid labor 6 per cent was used for washing and 13 per cent for ironing.

The houses of our cooperators differed widely in the extent to which they were equipped with running water, drains, washing machines, and

TABLE 3

Time spent by all workers in washing and in ironing in farm and non-farm households where one week's complete collection of laundry work was done during the week for 2, 3, 4, or 5 persons

TYPE OF HOUSEHOLD AND NUMBER OF PERSONS	PROPORTION OF HOUSEHOLDS SPENDING DIFFERENT AMOUNTS OF TIME ON WASHING					PROPORTION OF HOUSEHOLDS SPENDING DIFFERENT AMOUNTS OF TIME ON IRONING				
	Total number	Less than 2 hours	2 and less than 4 hours	4 and less than 6 hours	6 or more hours	Total number	Less than 1 hour	1 and less than 3 hours	3 and less than 5 hours	5 or more hours
		per cent	*per cent*	*per cent*	*per cent*		*per cent*	*per cent*	*per cent*	*per cent*
Farm households										
2	38	7.9	81.6	7.9	2.6	31	3.2	74.2	22.6	
3	38	10.5	52.6	31.6	5.3	33	6.1	72.7	18.2	3.0
4	65	7.7	44.6	43.1	4.6	60	8.3	65.0	25.0	1.7
5	56	1.8	33.9	58.9	5.4	50	4.0	76.0	16.0	4.0
Non-farm households										
2	21	19.1	52.4	23.7	4.8	19	5.3	63.1	15.8	15.8
3	40	10.0	57.5	30.0	2.5	38	5.3	60.5	29.0	5.2
4	37	2.7	46.0	32.4	18.9	37	5.4	54.1	32.4	8.1
5	38	10.5	42.1	31.6	15.8	36	5.6	38.9	36.1	19.4

TABLE 4

Relative time expenditures for one week's washing in farm households in which the work was done for different numbers of persons, stated in percentages of the time spent on such work for 2 persons (3.1 hours); including some households with a baby under 1 year of age*

NUMBER OF PERSONS FOR WHOM WASHING WAS DONE	ALL FARM HOUSEHOLDS		FARM HOUSEHOLDS WITH A BABY	
	Number	Time expenditure	Number	Time expenditure
		per cent		*per cent*
2	38	100		
3	38	119	3	191
4	65	124	2	175
5	56	139	5	194
6	24	151		
7	12	210		
8	7	179		
9	3	142		

* The figure for two persons was taken as the unit for these calculations. Households of two persons, of course, seldom include a child.

self-heating irons. The farm households were not nearly so well equipped as non-farm households; the larger ones were better equipped than the

smaller. With due allowance made for differences in the average number of persons for whom the work was done, washing was found to take slightly less time in the well-equipped house than in the poorly equipped one. The summary in table 6 includes only households where one week's complete collection of washing was done and no help employed.

The average time spent in ironing was practically the same for households in which it was done with stove-heated irons as in those equipped

TABLE 5

Average time spent on one week's collection of laundry by all workers in non-farm households where some help in the process was employed and in those where no help was employed

PROCESS	HOUSEHOLDS WITH SOME PAID HELP				HOUSEHOLDS WITH NO PAID HELP			
	Number	Average number of persons for whom work was done	Time per week per household		Number	Average number of persons for whom work was done	Time per week per household	
			hours	*minutes*			*hours*	*minutes*
Washing	7	5.43	5	04	159	4.15	3	54
Ironing	12	5.00	5	24	147	4.16	2	48
Washing and ironing	12	5.00	10	00	147	4.16	6	43

TABLE 6

Average time per week spent in washing by all workers in farm and non-farm households where no help in laundry was employed and where one week's collection was done; in those relatively well equipped and poorly equipped for washing

EQUIPMENT		FARM HOUSEHOLDS				NON-FARM HOUSEHOLDS			
Water and waste	Washing machine	Number	Average number of persons for whom washing was done	Average time		Number	Average number of persons for whom washing was done	Average time	
				hours	*minutes*			*hours*	*minutes*
Disregarded	None	96	3.93	3	59	49	3.71	3	54
Disregarded	Hand	80	4.04	4	07	32	3.47	3	50
Disregarded	Power	62	5.13	4	00	72	4.72	3	53
Both carried	None	41	4.00	4	14	20	3.45	3	44
Neither carried	Power	27	5.26	3	43	39	4.44	3	41

with self-heated irons. It was noted, however, that in the latter about as much laundry was put away without ironing as in the former.

None of the farm and only 4 of the 236 non-farm cooperators sent out all of their laundry during the weeks recorded. Less than 10 per cent sent out any laundry at all (except men's collars); and even among those living in communities of 2,500 or more, not 1 in 4 sent out laundry. Less than a fourth of these utilized the services of a laundress.

Those who did not send out all their laundry were asked to state their objections to doing so. Their replies are summarized in tables 7 and 8.

Less than half of those who did not send out all of their laundry gave definite objections to doing so. A third of all homemakers who answered the question, made such replies as "Like to do it," "Prefer to do it." Laundry work is a recognized part of the schedule of work in a considerable proportion of households, and having it done away from home is probably never considered by many, except in emergencies.

TABLE 7

Proportion of 311 farm and 232 non-farm homemakers giving certain replies to request for objections to sending out all laundry

REPLIES	FARM HOMEMAKERS		NON-FARM HOMEMAKERS	
	Number	Proportion	Number	Proportion
		per cent		*per cent*
None	131	42.1	99	42.7
"Like to do it," "able to do it," etc.	39	12.6	23	9.9
Definite objections	141	45.3	110	47.4

TABLE 8

Relative importance of objections listed by farm and non-farm homemakers to sending out all laundry

OBJECTIONS	FARM HOUSEHOLDS		NON-FARM HOUSEHOLDS	
	Proportion of homemakers by whom specified objection was listed	Proportion of specified objection to all those given	Proportion of homemakers by whom specified objection was listed	Proportion of specified objection to all those given
	per cent	*per cent*	*per cent*	*per cent*
Costs too much	83.0	55.7	79.1	58.8
Lack of place to send it	29.1	19.5	11.8	8.8
Work poorly done	18.4	12.4	24.5	18.2
Hard on clothes	13.5	9.0	14.5	10.8
Lose clothes	4.3	2.9	2.7	2.0
Have to have more clothes	0.7	0.5	1.8	1.4

Among the real objections to sending out laundry, the chief one given is the cost of commercial service. This does not imply that the housekeepers think that rates should be lowered, but rather, that money in the average home is so limited that they prefer other uses for it.

Where no help was employed for laundry, the share of it done by the homemaker herself averaged nine-tenths. The farm homemaker's help in washing came in about equal amounts from husband, other adults,

and children. Half of the washing help received by non-farm homemakers came from husbands. Children helped a little more with ironing than with washing.

When homemakers were asked, "Does any of your work tire you physically? If so, what kinds of labor?" the number of farm women specifying laundry was almost 5 times as great as of those specifying other tasks; and washing was more frequently specified than ironing.

The relation between fatigue from washing and the use of the washing machine is clear. Only 14 per cent of the farm women who had power washing machines listed laundry as a cause of fatigue, in contrast to 40 per cent of those who washed with a hand machine and 60 per cent of those with no machine at all.

TABLE 9

Proportion of total time spent on washing and ironing that was given by homemaker, by husband by other adults, and by children in households where no paid help was employed for these processes

TYPE OF HOUSEHOLD AND PROCESS	NUMBER OF HOUSEHOLDS	PROPORTION OF ALL CO-OPERATING HOUSEHOLDS	PROPORTION OF TOTAL TIME GIVEN BY VARIOUS PERSONS			
			Homemaker	Husband	Other adults	Children (under 19)
			per cent	*per cent*	*per cent*	*per cent*
Farm households:						
Washing	298	95.8	89.2	3.4	3.5	3.9
Ironing	302	97.1	90.2	0.0	4.7	5.1
Non-farm households:						
Washing	221	93.6	91.5	4.3	2.5	1.7
Ironing	216	91.5	91.8	0.3	3.6	4.3

In considering what constitutes efficient household management as applied to laundry, we obviously need to know more about the commercial laundry service available to rural households—accessibility, cost, and effect on garments. But we must also consider these factors in relation to the cost of doing laundry work at home under the conditions where it will not be an undue burden on the homemaker, and in relation to her possible labor income from alternative uses of her time. It is likely that in most households the result of a careful consideration of the laundry problem would be to make some use of commercial laundry service, even when money is very scarce, either for certain types of pieces such as men's work clothes and bed linen, at certain periods of the year as during harvest, or at certain stages in the homemaking career as when the children are all small or when the homemaker is well along in years.

OPEN FORUM

Suggestions for Graduate Studies of Home Management in Relation to Child Development. Readers of the JOURNAL OF HOME ECONOMICS will recall that in 1927 a study of home management in its relation to child development was undertaken by the American Home Economics Association with the help and cooperation of the two honor societies, Phi Upsilon Omicron and Omicron Nu. The data were collected by means of questionnaires which were either filled out by members of these fraternities or by families selected by them because of their good home standards. Nine hundred and thirty-nine families participated in the study.

The summary and interpretation of this material were made by Ruth Lindquist at the University of North Carolina. She used the returns from the 355 families who filled out the three schedules required for the complete study. There remains a great deal of valuable material which has not yet been tabulated or analyzed.

In response to inquiries from several colleges as to possible problems based on this material which might be undertaken by students, we are glad to print the following suggestions which were prepared by Miss Lindquist after a careful review of all the questionnaires which were filled in and returned:

1. The size and composition of a selected group of families
2. Problems of health and measures for preventing illnesses in a selected group of families
3. The nature of present-day housing and its contribution to convenience, comfort, and recreation
4. The division of labor in a selected group of present-day families
5. Food responsibilities of the modern homemaker
6. Clothing aspects of modern homemaking
7. A study of family financing, including attitudes, methods, and problems
8. A study of married women's opportunities for earning in a selected group of families
9. Factors affecting the child's participation in household activities
10. The extent to which labor-saving devices are used and attitudes toward them

The number of these that could be undertaken at the same time would be comparatively small since the student would need access to the material for a considerable length of time.

Studies of the following types are also suggested:

1. A comparison of the problems of child development in families with one child and in those with several children
2. An analysis of the factors contributing to successful technics in the teaching and training of children
3. The effect of income on the attitude toward care of children and the fatigue involved in their care and development

The office of the American Home Economics Association has the complete file of questionnaires and will be glad to correspond with colleges interested in making use of this material.—ANNA E. RICHARDSON, *American Home Economics Association, 620 Mills Building, Washington.*

World Movement for Progressive Education. For those teachers and parents who are conscious of the diverse sources of educational progress and who are desirous of being informed of educational research and experiment in all parts of the world, an affiliation has been arranged between the Progressive Education Association of America and the New Education Fellowship, an international world-wide organization with headquarters in England.

The New Education Fellowship has bureaus and sections in 28 countries and links together those who in all countries are seeking to adapt education to modern life. Every two years an international conference on new education is arranged at which members meet their colleagues from other lands. At Elsinore last year 2,000 teachers from 43 countries attended. The report of the conference "Towards a New Education" is now available. The next conference will be held in August, 1932, probably in the south of France. The Fellowship has also set up international commissions to study key problems of education that are facing educators in every country. Reports of these Commissions will be available to members.

Assistance will be given to teachers who are planning educational tours abroad, who need introductions to educators in other countries, and similar aid. Exchange of teachers and international correspondence between pupils will also be arranged.

A joint membership in the New Education Fellowship and in the Progressive Education Association entitles members to the receipt of the two magazines, the *New Era* (an international monthly, edited by Mrs. Beatrice Ensor, and bringing news of experiment and research in all countries) and *Progressive Education* (a monthly reflecting the growth

of progressive education in the States), and to the bulletins and services of the two organizations. The dues for this joint membership are $6.00 a year.

Sample copies of the two magazines and a booklet giving further information will be sent on application to the Progressive Education Association, 10 Jackson Place, Washington, D. C.

At this crucial time in the world's history there is an urgent need for international cooperation in educational and cultural spheres. There is a need for minds that think in world terms if we are to solve the great international problems that confront us. Education must prepare the young for new outlooks. It is to the teachers and parents that we look to foster in the young that international mindedness necessary to the attainment of world peace. The teachers must realize the new point of view of unity with the rest of the world, and it is to help them that the above affiliation has been arranged.—CLARE SOPER, *Secretary, New Education Fellowship, 11 Tavistock Square, London; W. C. 1, or 10 Jackson Place, Washington, D. C.*

World Friendship Day. A World Good Will Week was recently celebrated at the David Hale Fanning Trade School for Girls, where there were twenty-two nationalities in the school working together in a truly American spirit of fellowship. Inspired by the spirit and earnestness evidenced at the Elsinore meetings in 1929, we conceived the idea of a World Friendship Day as the theme of our annual "Open Day" program.

We gave to each national group an allotment of time and space sufficient to carry on as it pleased. Each group elected a chairman from the girls, and a teacher was chosen to head up the work. The girls "fell upon" the project as I have seldom seen young people do. They took the matter before the home council, the church, and their "high people." The spare time for two months was devoted to collateral study, covering history, geography, music, social customs, ancient prejudices, needlework, food, the League of Nations, and the Peace Pact. Most of this was done outside of school.

In many homes the native speech has been dropped and every trace of costume lost, but nearly all were eager to revive these associations, and sincere effort was made to have every feature authentic. Parochial schools, Historical Society, Public Library, Art Museum, and the International Institute came to the rescue with valuable suggestions; and many a home chest yielded up its choicest possessions of rugs, ancient

pipes, or strange copper utensils. The school caught the spirit and entered into the scheme by departments. Such interest in the study of costume and food, table service and symbolism, were never seen in our midst before. And the unpleasant rivalries that sometimes mar such occasions were lost in the wholesome desire to bring before our friends the choicest expression in a correct setting.

Some groups chose rooms where they could display their handicraft and serve foods after their own fashion; others put on programs. Throughout the building were seen ingenious cafés and tea rooms where national dishes were served in the most approved style—most of it prepared in the home kitchen, American efficiency and electricity being considered quite out of keeping with the sacredness of tradition. Chocolate was served by Alsatian girls in an out-door café under an awning; Syrians served rich cakes and Turkish coffee; in the English tea room one was charged a "shillin" for toasted muffins, black currant jam, and tea with "milk to it"; Germany dispensed (root) beer and pretzels; and all coffee drinkers were welcomed by the Finns and Swedes.

Each dramatic feature was heralded by the playing of the appropriate national anthem; and two pages, one holding a scroll with the name of the country and the other carrying its colors. The Lithuanians dramatized a peasant wedding. The girl-bride wore the simple folk dress and the wreath of mint and rue "from her own garden," with the streamers of ribbon which take the place of the bridal veil. With the groom and a party of laughing friends, they made their way up through the audience (as down a village lane) from the church to their new home (on the stage). Here they were met at the door by family and friends who served them with bread and salt and wine. Then there was singing and laughing, dancing and clapping. The little scene ended with the singing of the national hymn. The Armenian wedding was of the "high people." The procession from the church to the home of the groom's mother was led by the "matchmaker" who danced through the street ahead of the torch. The Swedes put on their famous weaving dance. The Syrians gave a dance that took us back very near to the Orient. Training was all done by their own people and they brought in their own musical instruments and musicians.

In the little American pageant the "Girl of 1930" introduced the Indian girl from whom, she told us, she had drawn "the spirit of adventure"; the Pilgrim girl, who brought "fortitude"; the Colonial girl, "courage"; the daughter of the pioneer, "vision"; the girl of '61, accompanied by a negro, "tolerance and patience"; while the three American

girl-organizations furnished "sportsmanship and recreation." The Girl of 1930, herself, stood for "training"; and "to this background of American tradition, we welcome girls of every nation." The Girl Scout bugled the "assembly call" as the school orchestra played "Land of Hope and Glory"; and 240 girls, nearly all foreign, in their colorful costumes, bearing their national flags, came silently crowding up through the audience to join the American girls.

The spirit of friendship was unmistakable. Long after the doors were supposed to close, foreign parents and friends were trying to express their appreciation. The burden of their expression was, "You have paid us a compliment."—ELIZABETH W. BURBANK, *Director, David Hale Fanning Trade School for Girls, Worcester, Massachusetts.*

Katharine Blunt's Inauguration. There must be many times when the editor of the JOURNAL is sorry that news items cannot be conveyed to the readers with the speed of the daily papers. Those of us fortunate enough to attend Katharine Blunt's inauguration who have been her colleagues or her students, certainly felt keen regret that it would be September before we could tell her countless other friends who read the JOURNAL what a pleasant party it was. There were the usual amenities—tea, reception, luncheon—but the focus of interest was, of course, the inauguration ceremony itself, which was held in a charmingly lighted tent erected for the purpose between two buildings.

The main address was given by Dr. Blunt herself, but she was delightfully supported by a choir of college students who sang a very carefully selected program with subtlety and dignity, and by congratulatory speeches truly unusual for their wit and sympathy. President MacCracken of Vassar spoke for Miss Blunt's alma mater, President Pendleton of Wellesley for the sister college of Connecticut College for Women, and Professor Nettleton of Yale for the brother institution. Dr. Blunt's own address was an interesting and comprehensive review of the changing ideas concerning the higher education of women, with an analysis of the responsibilities which the college should accept in preparing women to play their proper part in the modern world. In fact, it was so good that copious quotation is irresistible.

The training for homemaking, the home economics, which has developed so powerfully in the agricultural colleges and most of the state universities has had, it seems to me, a rather remarkable and contradictory double impulse to growth. It has been a recognition in the minds of some state legislators that if women's sphere is the home, they might well be given special education for that sphere. At the same time it was

and still is a response to women's demand for an education formulated by themselves to fit their own interests both domestic and professional. Some day in the history of higher education this "home economics movement" will, I believe, be given important position in the education of women both because of its extent and because of its demonstration that education for homemaking can be at once desirable and intellectual. There are many hundreds of colleges and universities with home economics schools or departments and a thousand or more young women registered in several of the largest of them. The bachelor's and master's degrees are awarded to students, and in the University of Chicago, even the doctor's degree. Sometimes in these many courses technical processes have been over-emphasized; sometimes changes in the economic demand upon homes have been ignored and the teaching has seemed to be an effort to return to the days before the development of the commercial bakery and ready-to-wear clothing, but on the whole the contribution of the movement has been great.

Research is needed here also, based on application to the household of both the natural and the social sciences, and a good deal of it either will be done by women or not done at all. Miss Hildegarde Kneeland of the U. S. Bureau of Home Economics speaks of the neglect by economists of one-third of our working population, the housewives. "The major cause (of this neglect)," she says, "is undoubtedly the very fact that the housewife's services do not come on the market. In this her position is unique. No other occupational group of significant size remains today outside of the price system." In other words, the economics of the household needs a different approach for study from the economics of business. The effective attack upon it will probably be made by women.

We have had somewhat greater progress so far in applying the natural sciences to the household than the social science. The study of nutrition, for example, in laboratory, medical clinic and agriculture has made marvellous strides in the last two decades, and much of the newly won knowledge can have immediate application to feeding the family and individuals. We seem now to know enough really to increase life expectancy of the adult, something in which public health efforts have heretofore failed, and this can best be done in part by educating our young people, the future parents, as to proper diet. Knowledge of children in aspects other than their nutrition has also grown in the past few years. . . .

There are other lines for the student interested in her future household problems—housing, for example, interior decoration, landscape gardening, these latter as avocations or vocations, but no one of them has quite the varied intellectual interest or the almost universal appeal that has the study of children. . . .

Professions for women have enlarged so greatly that the professional education in a women's college can well be widely varied. Training for teaching comes first, and probably will for many years—teaching based on as thorough a knowledge of the subjects chosen for teaching as an undergraduate college can give, and in addition, vital illuminating courses in education to help fit the young teacher into the educational systems of today and tomorrow and to give her an eager belief that teaching is the most worthwhile profession into which she can go. The young scientist in addition to preparing to be a teacher can seek training as laboratory technician or research assistant; the student of mathematics may become a statistician; the social scientist may develop into a community servant; the physical education major into a recrea-

tion leader; the art major into an illustrator; the home economist into the dietitian; the economist into the young business woman, the latter often the secretary. Others may wish to go into graduate study—medical, legal, academic. For all of these the college should offer in preparation either as much training as is required for the work or a thoroughly good start toward such training.

And, very carefully, the professional education must not be limited to the acquisitions of skills and techniques. It must include knowledge of the contribution of the chosen profession to society, of its relation to other lines of work. It must supply a breadth of background well beyond the day's requirement. The young chemist needs a sense of pride in practicing her science; the young social worker should be led to see herself as a part of great social forces; the young secretary can best find her skill a real introduction to business if, added to a modest desire to learn from her new surroundings, she has a knowledge of economics and history and language. Only so can the young woman attain to the height of the fortunate ones who find their greatest happiness in their work—a state to be desired for her whether she makes use of her professional education for a few years only until she marries, or for life; whether she is compelled to earn her living, or whether she feels the praiseworthy urge of today's young women to "do something." . . .

But a college that fixed its students' thoughts on the job only even in its broadest manifestations would fail woefully. All the riches of history, literature, philosophy, art, music must be available to the student, and science must be regarded not only as a useful tool for civilized man, but as one of the greatest revelations of God of all time. Young women respond eagerly to courses with non-utilitarian viewpoint. They are interested in beauty, and desire to create it themselves. They enjoy reading, and their intellectual and emotional responses to good poetry and good prose are keen and discriminating. The processes of thinking, of arguing give them satisfaction. Their desire for courses that they call "cultural" is very strong, even, their elders are sometimes inclined to feel, tending to the ornamental, to the detriment or sacrifice of more fundamental values.

It is a great pity that the distinction is so clear in the minds of the students and the curriculum makers between the "cultural" and the "vocational", or the "general" and the "professional." Dr. Moore of the University of California calls the distinction "the ancient double theory of knowledge which has made such a mess of man's comprehension of his relation to the world." The "cultural" can be highly useful, and the useful highly cultural, if both are well taught. One of the social contributions of higher education today is a synthesis of these two artificially separated fields. For example, the work in child development sketched above can be considered practical because it has direct influence upon the actions of the student, and at the same time theoretical because it supplies excellent illustrations of the observations and generalization of the natural and social sciences. It may be highly useful in the young woman's home or professional life, and it may be regarded as an important part of the heritage of the educated person, especially possibly of the educated woman.

The teaching of the so-called practical in the other lines also needs to be enriched and intellectualized and the teaching of the so-called cultural often needs to be vitalized by closer relation to life. The criterion for inclusion of any material in the curriculum might well be two-fold—does it lead to the enrichment of the individual or does it make her more of a contributor to social growth.

With such synthesis education recognizes that man may be not a beholder of his world merely but its shaper. The dilettante ineffectiveness not uncommon in the so-called educated person may thus give place to a well poised, well considered activity in moulding the social fabric. Education may thus help the graduates of the colleges to do the work of the world better than their parents did it. And the women's colleges in particular may thus lead women into the fullness of their heritage.

Dr. Palmer, the chairman of the Board of Trustees, who presided and who inducted Dr. Blunt into office, spoke with such evident sincerity of the place which she had already made for herself in the college community that I am sure that more than one of the new president's old friends left New London feeling as Dr. MacCracken says Vassar feels "Weel pleased to think her bairn's respeckit like the lave," taking sufficient liberty with the poet to substitute "friend" for "bairn."—ALICE F. BLOOD, *Simmons College, Boston, Massachusetts.*

Kabyle Village Life as Seen by a Home Economist. During a visit to Algeria this spring, it was my lot to spend some time in a little town called Azazga in the Grand Kabyle and to see a little of the way in which the people of that region live.

Azazga is a town of French colonists, beautifully situated on the spur of a mountain looking across the broad and very fertile valley of the River Sebaon and toward the higher mountains, still snow-capped at this season.

The Kabyle are Berbers, a race established in Northern Africa before the advent of the Arabs. Their language differs from that of the Arabs; and though they have adopted the Mohammedan religion, their form of it is considered heretical by the Arabs. The French found them very hard to conquer and did not succeed in getting a real hold upon the country until after 1871, when the policy was pursued of building excellent military roads and planting French colonies at strategic points, such as Azazga. The population of the region is almost as dense as that of Belgium, and the landscape even in the forest seems to be swarming with people. There is a very high birth rate, a very high death rate, and a certain amount of emigration on the part of the men who often go to France as rough labor so that the rate of increase is slowly falling off. There are French schools for the children in all French villages and in the larger native villages, but it is a difficult matter to make them go to school. The men get a certain amount of education during their military service, but it is said not to change them much.

In wandering around the outskirts of Azazga, I discovered a little hospi-

tal and made acquaintance with some of the personnel. It is merely an auxillary hospital which does clinical work and minor cases and obstetrics, sending serious cases to Algiers or to Constantine. There are two doctors and three nurses; none of the latter are graduate nurses. They hold clinics and do some visiting among the Kabyle but find it uphill work because the Kabyle are absolutely fatalistic about sickness. Their religion prescribes that in event of illness a feast shall be given, to which the entire village is invited; a sheep or a cow is killed, roasted, eaten, then a prayer for the recovery of the sick is offered by all the participants. If this does not avail, Allah does not wish the person to recover, and there is nothing to be done about it. Trachoma and skin diseases are prevalent; and infantile paralysis seems to have been almost endemic, judging by the many people of all ages who are evidently its victims. That the infant and maternity death rates are very high is not surprising when one sees how the people live. A description of a Kabyle home, which I had a chance to visit, will give some idea of this.

It was the home of a rich and important man of a tiny village near Michelet and was distinctly better than the average. The house faced a courtyard which it shared with several others, all of them occupied by my host's brothers and their families. It was built of large flat stones laid without mortar and had a rather flat tile roof. Near the roof were several small holes where stones had been omitted in laying up the walls, providing ventilation and an exit for the smoke. The living quarters consisted of a large room divided into two parts. One part was about two feet lower than the other, and in it lived the cow and the sheep and the goats; it was perfectly dark; about six feet from the dirt floor, beams were laid across to give a storage space above. The other part made a good-sized room, say eighteen by fifteen feet, and as high as the roof. It had a dirt floor, packed down hard by long use. A small low door opened into the courtyard. There was also a small window, which was spoken of as most unusual; it had no glass but a heavy wooden shutter. Toward the end away from the stable was dug a shallow fire hole, some six or eight inches deep. In this was a small fire of sticks. Upon it was a large crude earthen pot with an earthen cover, in which were boiling slowly the flesh of a kid, some wild small gourds, and some tomatoes. Around it on the floor squatted several women attired in gaudy red, yellow, or orange cotton dresses with much heavy native jewelry, huge fibulæ, bracelets, anklets, and earrings, made of silver crudely enamelled in blue, green, and yellow and set with coral-colored glass. Their feet and legs were bare, their heads wound up in shawls and kerchiefs. Two of the women tended the fire while a third was engaged in preparing "kouskous."

In the room stood the water jars, which they sometimes carry long distances upon their heads, and which have decorations very similar to those on some of the crudest of the early Greek and on some of our American Indian jars. In a wooden box suspended by cords from a beam was a five-months-old baby. Its face was covered by cloths to keep out the flies, which was fortunate; for in spite of the wood smoke, the proximity of animals brought many flies. There was no other furniture and no evidence of any sleeping arrangements, nor of any washing arrangements, nor of any sanitation. The place smelled of the combined odors of wood smoke, olives, animals, and humans.

Besides this living room there was a small room opening into the court, and containing two huge earthen jars for the storage of figs and of grain and some bags of ripe olives. Besides these belongings, the family owned a donkey and some chickens that shared the courtyard with the donkeys and the chickens of the relatives who lived in similar domiciles around it.

The kouskous such as the woman by the fire was making, is the staple food of these people. It is made of tapioca, water, and fresh butter. The woman mixed the ingredients in a large, flat-bottomed wooden tray about twenty inches in diameter and four inches deep, holding the tray by her knees and feet and mixing the stuff in her hands. It was then put into a crude earthen vessel with holes in the bottom, placed in the top of the other cooking pot, and cooked by steam.

The other items of diet of these people appear to be figs, oranges, ripe olives, various wild or half-wild vegetables (among them, asparagus, gourds, cucumbers, beans, tomatoes, leeks, and mushrooms), millet semoule (semolina), the flesh of goats, sheep, chickens, and, rarely, beef. Milk is used for making butter, but I could not find out whether they also drank it or made cheese. They also use French bread, which they buy in the villages. They do not drink wine nor do they make coffee at home, though they are fond of the chickory-diluted variety in French cafés.—HELEN BUTTRICK, *Algiers, Algeria.*

EDITORIAL

Home Economics in Higher Institutions. To home economists one of the most useful publications of the United States Office of Education is the bulletin which lists the higher institutions giving home economics instruction, with a few general statistics and the names of the persons in charge of the home economics work. It is, therefore, very welcome news that a new edition of this pamphlet is available, officially designated as United States Department of the Interior, Office of Education, Pamphlet No. 3, 1930, "Home Economics Instruction in Higher Institutions, Including Universities, Colleges, Teachers Colleges, Normal Schools, and Junior Colleges, 1928–29," by Emeline S. Whitcomb and Andrew H. Gibbs. It is based on returns for the school year 1928–1929 and includes, in addition to the information such as that collected for the earlier editions, the number of home economics courses offered and the number of students enrolled in them.

The total number of institutions reporting home economics instruction is now 584, of which 322 offer a 4-year curriculum leading to a bachelor's degree in home economics. In addition, 88 other higher institutions report home economics courses but do not give degrees in that subject. There are 90 normal schools and teachers colleges and 84 junior colleges reporting courses but not degrees in home economics.

Not quite all the institutions listed gave student enrollment. The 547 which did, showed a total of 50,640 enrolled in home economics courses, including 37,619 in courses leading to a baccalaureate in home economics; 3,502 in courses leading to other baccalaureate degrees; 6,556 in normal schools and teachers colleges; and 2,963 in junior colleges.

The total number of teachers of home economics (including a very small proportion on part time) was 1,672 for the higher institutions; 138 for the normal schools and teachers colleges; and 120 for the junior colleges.

A change of form that makes the new bulletin more convenient for reference is that the data are printed in tabular form.

Garment Sizes and Body Measurements. That "a perfect 36" is as rare among garments as among the humans for whom they are devised,

is no news to anyone experienced in buying ready-made clothing, certainly not to students of home economics who have measured garments of various makes. If anyone at the Denver meeting had illusions on the subject as it applies to women's dresses, these must have been dispelled by the "style show" given by the Textile Section, where fifty silk dresses purchased in different stores as size 38 were displayed on living models, whose actual measurements showed that this was theoretically the size that should fit them. A glance would often have been enough to betray how much variation there was in the dimensions of the dresses, even without the careful measuring that had been done to show its exact extent.

Manufacturers and dealers are equally conscious of the lack of standardization in garment sizes and some are trying to improve the situation. The United States Bureau of Home Economics is also actively concerned. In fact, a radio talk recently given by Ruth O'Brien, chief of the Bureau's division of textiles and clothing, tells the story so well that we repeat part of it here.

A number of conferences of ready-to-wear and pattern manufacturers have been held during the past few years to see what could be done about it. After listening in on a few of these some of us began to wonder where these sets of measurements now accepted as representing so-called perfect figures really came from.

We had always had the idea that at some time great numbers of people had been measured and the results classified so that the hip, waist, and other measurements of a garment labeled size 36 really represented the measurements of the great majority of women of that size. We began to make some inquiries about this and, would you believe it, we have found that no such studies have ever been made.

Some manufacturers will say that they check their measurements on perfect figures every once in a while, but when questioned closer as to just who decides what are perfect figures, the answers get very vague and hazy. Some have told us that the army and insurance records are the basis for the sizes of men's ready-to-wear clothing. Since we are afflicted with a big bump of curiosity, we went back through all the army and insurance records available and found a great many measurements of height and weight and chest circumference. But that was all. In fact, as far as a diligent search has revealed there are (with one exception) no published records of a truly scientific study of the body measurements necessary for making clothes or patterns.

This one exception is the work done by the War Department as the army was being demobilized at the end of the World War. At that time, there were still vivid recollections of the troubles they had had in getting well fitting uniforms. With that in mind, the measurements of a great many men were taken so that if it were ever necessary to clothe another draft army, sizes for the uniforms would be available. However, these measurements were taken for the standardized army uniform and do not include all that are necessary for civilian clothing.

Apparently what has really happened is that the manufacturers, hard put to it,

have had to call in small groups of people who looked average, and measure them. Their set of proportions were then labelled perfect 36's and 38's and so on and a few inches added here or subtracted there to get proportions for thin people or fat ones. In other words, many of the measurements have been made with a lead pencil and nothing else. The same seems to have happened in the case of children's clothing. We have started to keep account of all the mothers who tell us their children are so well developed that they wear garments made for children 2 or 3 or 4 years older. We have about decided that all ready-to-wear clothing for children is at least 2 sizes too small. But as one merchant said philosophically, "Well, it makes the parents happy to think their children are large for their age." We have also been forced to the conclusion that many of the measurements now used have been inherited from a dim and distant past. No one knows just where they came from. But the fact that they are old makes them greatly respected.

Recently, manufacturers have been sending out questionnaires and accumulating sets of measurements now in use, and recommending the general adoption of the most commonly used. This is good in that it helps toward more uniformity in garment sizes, but whether it will make them correspond to actual bodily sizes and proportions is another question. The alternative method of making large numbers of accurate body measurements and applying the results to garment and pattern sizes is obviously more troublesome and costly. Moreover, there are practical merchandising difficulties in changing from the old system. For example, a manufacturer may be able to undersell his competitors because he has reduced the material used in his garments by decreasing certain of the measurements; in such a case neither the store buyer nor the final consumer may realize that his bargain is not a bargain. One wonders if such price competition may not have had something to do with the smallness of children's garments.

Be that as it may, the present haphazard method of determining sizes for garments and garment patterns seems rather archaic in face of the faith which American business professes in efficiency and standardization. Its results are certainly annoying to consumers, and those who understand the situation are glad that the Bureau of Home Economics has taken a first step toward scientific procedure in this field. This is the bulletin by Miss O'Brien, "An Annotated List of Literature References on Garment Sizes and Body Measurements," which has recently been published as United States Department of Agriculture Miscellaneous Publication No. 78 and of which a limited supply is available for free distribution by the Bureau. The subheads under which the references are grouped, suggest the sources of further information or lines of research: "Systems of body proportions developed by artists," "Measure-

ments now used in the clothing trade," "Anthropometry: its scope, methods, and instruments," "Measurements of children," "Measurements of adults," "Need of a scientific basis for garment and pattern sizes." It is much to be hoped that means will be provided by which the Bureau can take the lead in a study of body measurements as the basis for determining the sizes and proportions of ready-made garments and garment patterns.

The World Agricultural Census. The plan of the International Institute of Agriculture in Rome to have all countries of the world take an agricultural census this year by uniform methods, is one which not only promises important practical results but stimulates the imagination tremendously. Leon M. Estabrook of the United States Department of Agriculture, who, it will be remembered, was in charge of the preliminary work, is now back in Washington and recently told some of the impressions gained during the extensive travels which he made in connection with it. The *Official Record* reports as follows:

> During his tour into practically every nook and cranny of the globe, Mr. Estabrook obtained the promise of a uniform agricultural census from all but three countries of the world. Persia, Afganistan, and Bolivia are the only countries for which promises of cooperation in the world census were not given. This census will represent 97 per cent of the globe, 98 per cent of the population of the world, and 99 per cent of the agricultural production of the world.
>
> The census will include number and size of farms, classification of farm land, acreage and yields of principal crops, livestock populations, and related information. Advanced countries will compile a more detailed census. Russia has the world's largest statistical organization.
>
> "One of the strongest impressions gained in my travels," Mr. Estabrook said, "was that about half of mankind are still using methods of their forefathers who toiled before the dawn of history." Crooked stick plows drawn by women, grain cutting by the handful, threshing by treading with oxen, and milling with a camel and two revolving stones are among the more primitive methods he observed. In some countries the introduction of labor-saving machinery was met with revolts by peasants who feared the loss of their jobs.

The American Standards Association and the Ultimate Consumer. President W. J. Serrill, summarizing the year's work of the Association in its newly published "American Standards Year Book, 1930," refers to the more liberal policy made possible by its recent reorganization and shows that one effect has been to open membership in the Association to a greater range of trade associations. The ten member

bodies admitted since 1928 include, besides organizations of producers, several which may be said to represent, at least partially, the point of view of the consumer. These include the American Home Economics Association, Laundryowners National Association of the United States and Canada, National Association of Mutual Casualty Companies, National Bureau of Casualty and Surety Underwriters, and the National Safety Council.

Regarding the results so far observable, Mr. Serrill says:

> With the American Home Economics Association and the Laundryowners Association as member-bodies, new projects in the field of ultimate consumer goods have been initiated. These projects, which have met with a cordial public reception, include the establishment of specifications for household refrigerators, sheets and sheeting, and blankets. All three were initiated at the request of the American Home Economics Association, and in the two textile projects the Laundryowners Association has taken an important part. The excellent technical work being done by both of these organizations makes them especially fitted to interpret technically the consumers' needs in the standardization of household goods.

Such a statement is not only complimentary to the impression made by our representatives at conferences dealing with these special projects but augurs well for yet further increase in the attention given to the opinion of the household consumer. Recognition of this sort may have salutary influence on some of the conservative distributors whom Mr. Freedman (see pages 732 to 734) finds rather reluctant to fall in line for another movement in the same general direction.

International Congress of Mental Hygiene. The attention given by the press to this Congress, which brought an unprecedented and unexpected number of persons from all over the world to Washington from May 5 to 10, proved at least two things: that mental hygiene is a subject which can be made to catch general interest; and that by skillful publicity, both before and at the time of the meetings, such a gathering can be made to give enormous impetus to a movement for social welfare. The time was undoubtedly ripe for focusing public attention on the possibilities of social improvement by the application of what we already know regarding mental hygiene and by increasing such knowledge. Nevertheless, if there had not been a congress, or if one had been held without the careful planning, the distinguished support, and the financial backing which Mr. Clifford Beers secured for this one, there would not have been such a concentration of interest at one time. It seems a safe guess, for instance, that the American Academy of Political and Social

Science had the congress in mind when it planned to issue a symposium on "Some Social Aspects of Mental Hygiene" as Part III of the May *Annals*. Several magazines also emphasized the general subject in May and June issues. In "Mental Hygiene Looks at the World," Mary Ross gave to the June midmonthly *Survey* an excellent summary of the Congress and its significance.

Evening meetings of the Congress were mainly largely-attended, public sessions with distinguished speakers. Several afternoon sessions were devoted to brief, informal talks by delegates from the fifty-three countries represented—a delightful device for increasing the international flavor. The forenoons were given up to sessions on special aspects of mental hygiene; the three or four papers presented at each had been printed and distributed to members in advance (the pile for the whole Congress was good three inches thick!), and were orally presented only in brief summaries, after which there was opportunity for general discussion. Material of special interest to home economics was given in sessions which dealt with mental hygiene in relation to schools, to child development, and to family life.

White House Conference. The purpose and organization of President Hoover's Conference on Child Health and Protection are described in an attractive little booklet issued in July. Members of the planning committee are listed, together with the chairmen of sections and principal committees, and the objectives of the latter are defined. Copies of the booklet may be obtained on request from the headquarters of the Conference, Interior Building, Washington, D. C.

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RESEARCH

A STUDY OF THE JAPANESE PERSIMMON GROWN IN FLORIDA

Nutrition Research Laboratory, School of Home Economics, Florida State College for Women, Tallahassee

I. Chemical Analysis

JENNIE TILT AND REBECCA B. HUBBELL

The so-called Japanese persimmon, Diospyros kaki, is easily grown in Florida. The fruit matures during the late summer and early fall when there is relatively little fruit in this section. Until quite recently the use of persimmons has been local. With the recognition that it is a desirable fruit, production has been stimulated and the market has widened.

The data published on the persimmons have been on both the native and the Japanese varieties. Those on the Japanese are summarized in table 1.

There are several varieties of the persimmon which are grown more or less extensively at the present time, namely: Tane Nashi, Okami, Fuyugaki, Triumph, Zengi, Tsuru, and Tamopan (Chinese persimmon). Of these the Tane Nashi and Okami are probably the best known. The Tane Nashi is a large fruit, three or four inches in diameter, broadly conical and tapering gradually upward from the base; it is light orange in color, with a smooth glossy surface; the flesh is quite mealy and pasty; it is usually seedless. Okami is smaller, not conical in shape, with about five deep grooves running lengthwise of the fruit; it is dark red in color; and the flesh is yellow, somewhat fibrous, and not at all mealy. The fruit of the Fuyugaki is nearly round, somewhat flattened, with a tough skin and light reddish-yellow color; it differs from the others in that it does not become soft as it ripens but can be peeled and eaten like an apple. Zengi is a small fruit, often not more than one and one-half inches in diameter; it is dark orange-red in color and marked with russet lines around the apex; the flesh is very dark, being almost black when seeds are present; it has a very rich flavor and is quite sweet. Triumph is often called the tomato variety, because it so closely resembles that fruit; it is small, flat, and quite firm in texture even when ripe; the flesh

is somewhat granular. Tsuru is small, oblong, and longer in proportion to its size than the other varieties; it is orange-red in color, with a smooth, rather thick skin. Tamopan, the Chinese variety, is quite large and

TABLE 1

Composition of Japanese persimmons (composition of persimmon pulp expressed as percentage of pulp)

INVESTIGATOR	VARIETY	MOISTURE	PROTEIN	ASH	TOTAL SUGARS AS REDUCING SUGAR	FIBER
		per cent	*per cent*	*per cent*	*per cent*	*per cent*
Colby (1)	Hiyakume				18.20	
McBryde (2)	Hachiya	71.77	0.93	0.88	16.83	
	Tsuru	73.46	0.74	0.64	15.67	
	Hiyakume	70.17	1.10	1.15	17.82	
	Yemon	76.26	0.45	0.60	15.99	
	Japanese graft on native	75.00	0.42	0.45	16.55	
Jaffa (3)	Kaki seedling	77.04	1.61	0.72	19.39[1]	0.93
	Tane Nashi	81.93	1.16	0.62	12.81[1]	2.93
	Yemon	81.66	1.32	0.61	13.19[1]	2.37
Jaffa (4)	Sweet variety	84.80	0.61[2]	0.43[2]		
	Astringent variety	86.00	0.58[2]	0.43[2]		
Bigelow, Gore, and Howard (5)	"Hachiya"[3]		0.10[4]		14.57[5]	4.40[6]
	"Hachiya"[3] stored 25 days				17.28[5]	5.70[6]
	"Tsurunoko"[3]		0.086[4]	0.50	17.26[5]	3.52[6]
	"Tsurunoko"[3] stored 14 days				19.44[5]	5.09[6]
Embrey (6)	Kaki diospyros	79.81	0.70		18.90[7]	1.30

[1] Sugar, starch, etc.

[2] Composition of persimmon pulp expressed as percentage of total fruit.

[3] Bigelow, Gore, and Howard state: "Quotation marks indicate that these fruits were from scions imported under the variety named, and grafted on American stock, but were not true to name."

[4] Figures given are for nitrogen.

[5] Figures given are for reducing sugar expressed as invert sugar.

[6] Marc.

[7] Total carbohydrate by difference, including fiber.

flat with a constriction below the middle; it is light orange-red in color with a thick, tough skin; the flesh is yellow and quite juicy and stringy.

Because of the increasing interest in persimmon culture, we have undertaken to secure data on the chemical composition of these varie-

ties. The immature fruit was obtained in October and allowed to ripen at room temperature. The fruit was considered ripe when it was very soft, almost liquid, but still retaining its shape. At this stage the skin could be peeled off easily. This was true of all varieties except Fuyugaki which does not soften on ripening. The fruit was prepared for analysis by peeling and then straining through a fine seive. This was done in order to get a uniform sample, as the texture of the outer parts was quite different from that surrounding the core. A small residue was discarded, consisting of seeds and the gelatinous material which surrounded them or which occupied the core of the fruit when seeds were absent. Samples were taken from the prepared pulp. Analyses for carbohydrate, moisture, ash, fiber, and protein were made on individual fruits.

The ash of two varieties, Tane Nashi and Okami, was analyzed for calcium, magnesium, phosphorus, sulfur, iron, copper, and manganese. The determinations of copper and manganese were made because of the recent interest in the metals present in minute traces in biological materials. In each case the ash used was a composite of approximately one hundred persimmons. It seemed better to use a composite ash rather than to attempt determinations on that of individual fruits, since the amount of material available from a single fruit is so small. To prepare the ash, the pulp was dried on the hot plate and the semi-charred material completely ashed in the electric furnace at a temperature just below dull red heat.

For the proximate analysis, the methods of the Association of Official Agricultural Chemists were used (7). In the ash analysis the following methods were used: for calcium, McCrudden's volumetric (8); for magnesium and phosphorus, the method as outlined in Fales' Inorganic Quantitative Analysis (9); for sulfur, Official Methods; for iron, the method of Elvehjem and Hart (10); for copper that of Elvehjem and Lindow (11); and for manganese the Willard and Greathouse colorimetric (7). The results of the proximate analysis are given in table 2 and for the mineral elements in tables 3 and 4 (pages 760 and 761).

Discussion. The most interesting data in table 2 are those for carbohydrate, for with the exception of a small amount of fiber it is entirely in the form of reducing sugar. Repeated attempts were made to estimate sucrose and starch, but the results were always negative. This is in accord with the earlier work of McBryde (2). The average amount of reducing sugar found in our fruit varies from 11.55 per cent in Tsuru to 17.39 per cent in Zengi, with some individual fruits showing as much as 20.48 per cent. In comparison with other fruits, the persimmon is out-

standing in its high carbohydrate content. Those which seem to come in the same group from this standpoint are fresh figs, fresh prunes, and bananas. In addition to the reducing sugar, another characteristic is the very low fiber content. In the case of Fuyugaki the amount found

TABLE 2

Composition of fresh persimmons (persimmon pulp)

VARIETY	MOISTURE		PROTEIN (N × 6.25)		ASH		CARBOHYDRATES			
							Reducing sugar as dextrose		Fiber	
	Number of samples	Percentage	Number of samples	Percentage	Number of samples	Percentage	Number of samples	Percentage	Number of samples	Percentage
Okami	8		6		8		8		7	
Average		78.42		0.869		0.461		16.70		0.213
Maximum		80.90		1.080		0.512		18.94		0.432
Minimum		76.19		0.709		0.404		14.38		0.030
Tane Nashi	9		7		9		9		6	
Average		81.43		0.431		0.335		13.41		0.298
Maximum		82.39		0.555		0.410		13.93		0.430
Minimum		80.68		0.306		0.276		12.68		0.154
Fuyugaki	10		7		8		10		10	
Average		81.35		0.612		0.444		16.04		0.111
Maximum		83.58		0.693		0.484		17.65		0.400
Minimum		79.45		0.503		0.395		15.16		0.000
Triumph	10		7		6		10		4	
Average		77.06		0.658		0.513		15.87		0.488
Maximum		78.51		0.990		0.583		18.43		0.644
Minimum		76.26		0.442		0.428		13.27		0.360
Zengi	11		5		11		11		3	
Average		76.27		0.626		0.523		17.39		0.206
Maximum		78.80		0.785		0.593		20.48		0.281
Minimum		72.55		0.355		0.473		14.89		0.088
Tsuru	8		2		8		8		0	
Average		80.23		0.735		0.576		11.55		
Maximum		82.81		0.756		0.651		12.40		
Minimum		77.34		0.713		0.484		11.05		
Tamopan	6		3		5		6		5	
Average		81.71		0.669		0.304		13.81		0.337
Maximum		82.77		0.687		0.357		14.68		0.530
Minimum		80.66		0.658		0.264		12.46		0.223

is 0.11 per cent. In some of the individual fruits of this variety the amount is so small that it cannot be estimated with accuracy in the weight of sample usually taken for fiber determinations. These results would seem to be in accord with the very fine smooth texture of the flesh

which was entirely free from the fibrous material found in some of the other varieties. The highest figures are obtained for Triumph (0.49 per cent) and for Tamopan (0.34 per cent) which again is in accord with their texture. Even the highest figures obtained are somwhat lower than those which have been reported on similar varieties by other workers. These results place the persimmon in the group with other fruits which are low in fiber.

Summary. Seven varieties of persimmon show a range in average moisture content from 76.27 per cent in Zengi to 81.71 per cent in Tamopan. The reducing sugar varies from 11.55 per cent in Tsuru to 17.39

TABLE 3

Composition of persimmon ash

	CALCIUM	PHOSPHORUS	MAGNESIUM	SULFUR	IRON	COPPER	MANGANESE
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
Okami	2.25	4.45	2.29	2.02	0.106	0.0195	0.066
Tane Nashi	2.57	4.46	2.30	1.59	0.143	0.0139	0.037

TABLE 4

Mineral elements in 100 grams of fresh persimmon

	CALCIUM	PHOSPHORUS	MAGNESIUM	SULFUR	IRON	COPPER	MANGANESE
	grams	*grams*	*grams*	*grams*	*milligrams*	*milligrams*	*milligrams*
Okami	0.0104	0.0205	0.0106	0.0093	0.489	0.090	0.304
Tane Nashi	0.0086	0.0149	0.0077	0.0053	0.479	0.047	0.124

per cent in Zengi; the protein from 0.43 per cent in Tane Nashi to 0.87 per cent in Okami; the ash from 0.30 per cent in Tamopan to 0.58 per cent in Tsuru; and the fiber from 0.11 per cent in Fuyugaki to 0.49 per cent in Triumph. The carbohydrate, except for fiber, occurs as reducing sugar.

The analysis of the ash of Tane Nashi and Okami calculated on the basis of 100 grams of fresh persimmon gives the following figures: *Tane Nashi*, calcium, 0.0086 gm., phosphorus, 0.0149 gm., magnesium, 0.0077 gm., sulfur, 0.0053 gm., iron, 0.479 mg., copper, 0.047 mg., and manganese, 0.124 mg. *Okami*, calcium, 0.0104 gm., phosphorous, 0.0205 gm., magnesium, 0.0106 gm., sulfur, 0.0093 gm., iron, 0.489 mg., copper, 0.090 mg., manganese, 0.304 mg.

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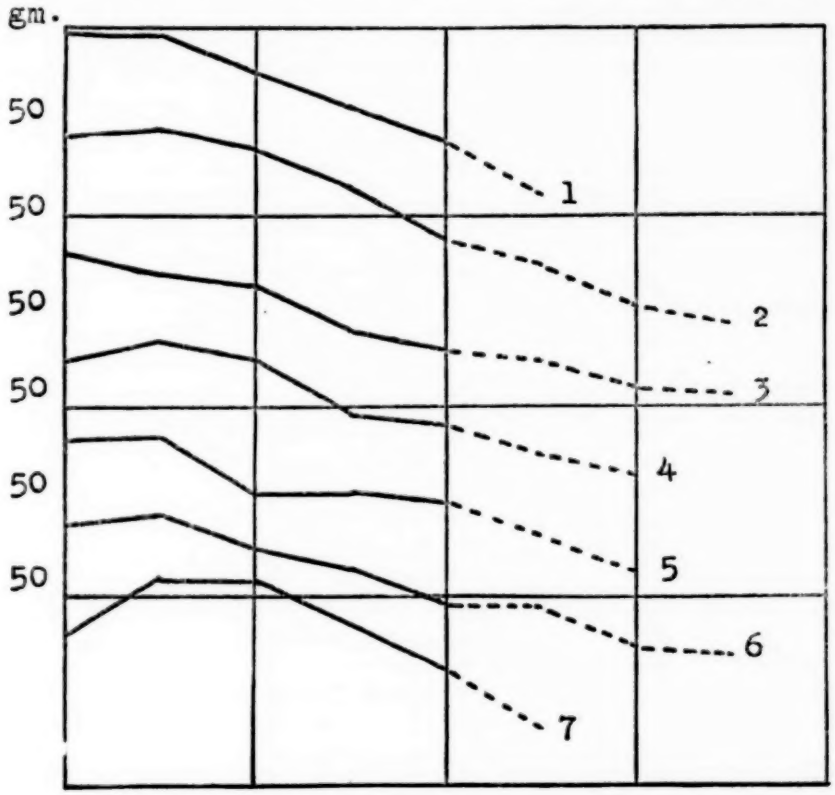
II. The Vitamin B Complex

JENNIE TILT, REBECCA B. HUBBELL, AND LOIS INMAN

In addition to the chemical analyses of the Japanese persimmon reported in part I, we have begun a study of the vitamin content of one variety, the Tane Nashi. The literature gives very few reports of studies of this kind. Embrey (1) reports that the Japanese persimmon is deficient in vitamins. Iwasaki (2) found that the ripe kaki in amounts of 10 cc. daily will cure scurvy completely in thirty days while Hsü (3) states that the "Persimmon diospyros kaki, Linnaeus, is poor in vitamin C." Our work so far has been on vitamin B (the term vitamin B referring to the complex).

The quantitative method of Sherman and Spohn (4) for the study of vitamin B was used to determine the amount of the persimmon which must be added to a B-free basal diet in order to maintain animals over a period of eight weeks. Albino rats 28 days old, weighing from 40 to 50 gm. were used. A basal diet, consisting of B-free casein 18 per cent (5),

corn starch 68 per cent, butter fat 8 per cent, Osborne and Mendel salt mixture 4 per cent (6), and cod-liver oil 2 per cent was used. The animals were kept in individual cages with the usual raised bottoms to prevent



AVERAGE GROWTH CURVES FOR ANIMALS FED ON DIFFERENT AMOUNTS OF PERSIMMON

Curve 1, 1.0 gm. persimmon per day
Curve 2, 1.5 gm. persimmon per day
Curve 3, 2.0 gm. persimmon per day
Curve 4, 2.5 gm. persimmon per day
Curve 5, 4.0 gm. persimmon per day
Curve 6, 5.0 gm. persimmon per day
Curve 7, Negative control

The solid lines of the curves give the average weights of all animals.

The dotted lines show the average weights of the survivals after the first death.

The space between horizontal lines represents 20 grams; that between vertical lines represents 14 days.

access to excreta. The persimmon was fed at the following levels: 1.0, 1.5, 2.0, 2.5, 4.0 and 5.0 gm. daily. The fruit was peeled and strained through a fine seive, thus giving a uniform pulp. It was then carefully

weighed on inverted crucible lids and placed in the cages before the basal diet was given. On the lower levels of feeding the persimmon was consumed almost instantly, but with the larger amounts this was not always true. In this report we are including only those animals which ate the full portion after the first two or three days. The accompanying chart gives the average weight curves showing the results of these experiments.

TABLE 1

Survival period of animals fed on different amounts of persimmon

AMOUNT PERSIMMON	NUMBER OF ANIMALS	AVERAGE INITIAL WEIGHTS	NUMBER OF ANIMALS SURVIVING AT END OF DIFFERENT PERIODS				AVERAGE SURVIVAL PERIOD
			5 weeks	6 weeks	7 weeks	8 weeks	
grams		*grams*					*days*
1.0	10	49.9	6	0	0	0	34.4
1.5	36	48.6	22	5	1	0	35.5
2.0	30	46.8	16	5	1	0	38.5
2.5	12	45.5	5	2	0	0	35.5
4.0	7	49.7	4	2	0	0	36.0
5.0	7	48.8	6	3	1	0	38.4
None	7	46.7	3	0	0	0	33.1

TABLE 2

Percentage survival of animals fed on different amounts of persimmon

AMOUNT PERSIMMON	NUMBER OF ANIMALS	PERCENTAGE SURVIVAL AT END OF DIFFERENT PERIODS			
		5 weeks	6 weeks	7 weeks	8 weeks
grams		*per cent*	*per cent*	*per cent*	*per cent*
1.0	10	60.0	0.0	0.0	0.0
1.5	36	61.0	13.8	2.8	0.0
2.0	30	53.3	16.6	3.3	0.0
2.5	12	41.6	16.6	0.0	0.0
4.0	7	57.1	28.5	0.0	0.0
5.0	7	85.7	42.9	14.2	0.0
None	7	42.0	0.0	0.0	0.0

Discussion. A study of the chart shows that within the limits fed, at least, the persimmon does not have sufficient vitamin B for maintenance when the rest of the diet is known to be adequate except for this factor. This is shown by the fact that there is very little variation in the average weight curves for the different levels. In all cases there is practically no initial increase in weight, but a steady decline from the beginning. Compared with the negative controls there is very little difference in favor of the persimmon. Since the average weight curves showed so

little variation the results were analyzed on the basis of the survival period. These results are shown in tables 1 and 2. The only evidence of the presence of the vitamin is that the survival period is somewhat longer when the persimmon is added than when the basal diet alone is fed. All of the animals lived through the fourth week. At the end of the sixth week there is seen an increased percentage survival parallel with the increase in the amount of persimmon fed. At the end of the seventh week the results are not uniform, but the group which was fed on the highest level of persimmon shows the greatest percentage of survival. None of the animals lived through the entire experimental period of eight weeks.

Summary. Experimental evidence has been presented which shows that the Tane Nashi variety of the Japanese persimmon as grown in Florida is a very poor source of the "vitamin B complex."

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BOOKS AND PERIODICALS

NEW BOOKS

The Relation of Diet to Health and Growth of Children in Institutions. With a Method of Evaluating Dietaries and a Three-weeks' Dietary Conforming to the Standards Proposed. Child Development Monographs, Monograph No. 2. By MARY SWARTZ ROSE and CORA E. GRAY. With the cooperation of KATHERINE L. FOSTER. New York: Bureau of Publications, Teachers College, Columbia University, 1930, pp. 128, $1.25.

It is gratifying that such able and distinguished investigators as Dr. Mary Swartz Rose and her associates have chosen the relation of diet to health and growth of children in institutions as the subject of thorough and extensive study. This book is by no means their first contribution to the problem; but because of the method used, the accuracy of the data secured, and the length of the period covered by the study, it is the most convincing and illuminating of any so far presented.

Probably no problem has troubled those deeply interested in the welfare of children more than practical ways, that were also scientifically sound, of determining the adequacy of children's dietaries, of finding the defects in the quality of the dietary, and of discovering possible correlations between food intake and gains in height and weight. Dr. Rose, Miss Gray, and Miss Foster have met these needs and set up in their study the problems which need to be faced in such situations.

Their report includes surveys of dietaries, for a year, in four child-caring institutions, one rural, two urban, and one suburban in location; all four had a healthy environment and a cheerful, friendly atmosphere; all but one of the surveys was continued for a year. The object of the investigation was to discover whether the study of a dietary by food groups and by determining the percentage of total calories furnished by each of these groups would be valuable in finding defects in the quality of the dietary. The method followed, the problems faced and solved will serve as a guide for those already doing work in the field of institutional care of children and for future study.

The authors drew the following conclusions from their work: "These dietary studies have demonstrated that an analysis showing the per cent of total calories furnished by each of six food groups, viz., (1) foods from cereal grains, (2) milk, (3) fruits and vegetables, (4) fats and oils, (5) sugars and sweets, (6) eggs, cheese, meats, and other flesh foods, will reveal probable defects in the diet, since each group makes certain typical contributions. If the fats are too low, there will in all probability be a deficiency in total calories. If the milk is too low, there will be a deficiency of calcium unless cheese is used in unusually large amounts to take the place of the milk. To have at least 25 per cent of the calories from milk means not only liberal calcium but also an adequacy of vitamin

A. If milk is low and little fat containing vitamin A is used, there is danger of serious deficiency in vitamin A. If the fruits and vegetables are too low, the most obvious defect is likely to be in iron, but there is also probability of an insufficient supply of vitamins B and G for optimal health and growth. It is recommended that dietaries of child-caring institutions be checked against the standard proposed for a dietary of moderate cost and also as to the adequacy of the total calories. The menu should be studied to see whether foods are well distributed over the day and week, whether suppers as well as dinners are liberal, and whether there has been resourcefulness in food selection. The kitchen and dining rooms should be visited to determine food waste. The food needs to be tasted to see whether it is well cooked and properly served, especially as to temperature. The children should be checked against high standards of physical development and efficiency to be sure that every child has his own proper quota of the diet which is furnished."

The book makes a valuable contribution to the thinking of the students in this field and will stimulate further investigations.—MARY E. SWEENY, *Merrill-Palmer School, Detroit.*

The Federated Council on Art Education. Report of the Committee on Terminology. By WILLIAM G. WHITFORD, LORADO TAFT, and RAYMOND P. ENSIGN. Boston: The Berkeley Press of Boston, 1929, pp. 79, $0.50.

"A simplified art vocabulary of exact meaning for use in art instruction" is one of the aims of the Federated Council on Art Education, a group of representatives of national and sectional organizations interested in art education. "Approximate uniformity in the use of a few vital and significant terms in the schools throughout the country is not too great an achievement to hope for."

With this aim in view, the committee on terminology worked for a number of years to determine just what terms are the most vital and significant in art instruction. The attempt was to determine the generally accepted terms and arrange them in a very simple classification in the hope that it would aid in the teaching and in the understanding of the principles of art.

The present volume gives the results. Part I describes the preliminary studies made of the vocabularies used in books, periodicals, and published courses of study to determine what terms were in most general and significant use. These terms were then classified after consultation with prominent artists and teachers and after further submission to 230 art educators, with results as described in Part II. The final classification adopted was based primarily upon the needs of public schools, and the terms chosen as most significant were as follows: 1. *Basic Elements:* Line, form, light and dark (tone), color, and texture. 2. *Major Principles:* Repetition, rhythm, proportion, balance, and emphasis. 3. *Minor Principles:* Alternation, sequence, radiation, parallelism, transition, symmetry, contrast. 4. *Resulting Attributes:* Harmony and fitness. 5. *Supreme Attainment:* Beauty.

Lists of synonymous or related words and illustrative and explanatory notes are also given. Part III contains definitions of these terms, with quotations from several authorities for each, and is especially valuable.

The report as a whole will be welcomed by teachers of home economics as well as by art teachers. In the past the authorities have not agreed entirely on the more important terms listed as de-

sign principles, and each teacher has used the terminology she learned as a student. The resulting confusion in the use of terms has been a real handicap. "Just what is the difference between rhythm and repetition?" or "Are transition and opposition principles of design?" are typical questions repeatedly asked.—MABLE RUSSELL, *Iowa State College, Ames.*

Essentials in the Selection of Meat for Students of Home Economics. By VIOLA M. BELL and MAURICE DAVID HELSER. New York: John Wiley & Sons, Inc., 1930, pp. 121, $2.00.

Material on the structure, composition, preparation for market, preservation, cooking, and selection of meat in general, with separate chapters on beef, veal, lamb and mutton, and pork, brought together by the former associate professor of foods and nutrition at Iowa State College and the professor of animal husbandry in the same institution, the latter also in charge of meat investigations of the Iowa Agricultural Experiment Station. Included are many excellent pictures, diagrams, and tables. Of value not only to college students but also to persons taking part in meat-judging contests. In loose-leaf binding.

Stuff. The Story of Materials in the Service of Man. By PAULINE G. BEERY. New York: D. Appleton and Company, 1930, pp. 504, $5.00.

A readable volume in which the author (better known to home economists as Pauline Beery Mack) has shown great ingenuity in assembling and organizing information about the production and use of all sorts of materials used in ordinary life, and in doing this with many touches of humor as well as broad knowledge of the sciences. Among chapter headings are "Cold Stuff," "Rainy Day Apparel," "Textiles from Test Tubes," "Skillets and Skyscrapers." There are well-chosen illustrations from photographs and attractive wood-cut chapter heads by W. B. Mack.

Millinery Processes. By CARLOTTA M. BROWN. Boston: Ginn and Company, 1930, pp. 187, $1.60.

The fundamental processes of hat-making presented for college or high school students of clothing construction and for homemakers responsible for the family wardrobe; by an instructor in millinery at the University of Minnesota who has also had experience in high school, extension, and commercial work. Contains many helpful illustrations.

A Dictionary of Color. By A. MAERZ and M. REA PAUL. New York: McGraw-Hill Book Company, Inc., 1930, pp. 207, $12.00.

A valuable reference book for anyone who wishes to relate colors with the names by which they are commonly identified. Contains 56 colored plates, each divided into many small sections showing various gradations of colors and accompanied by an uncolored chart on which are printed the names given to the colors shown in the corresponding sections of the colored plate. Included are a brief description of color standardization and notes on the color names mentioned on the charts. The colors and names are said to represent the largest collection ever assembled. No attempt is made to advocate any special theory of color.

Children at the Crossroads. By AGNES E. BENEDICT. New York: The Commonwealth Fund, Division of Publications, 1930, pp. 238, $1.50.

This book contains nine narratives based upon case records of rural visiting

teachers, with chapters of interpretative discussion. Seven drawings by Cyrus LeRoy Baldridge illustrate the stories. Typical ones describe Raymond, who declared war against his world; Fanny, triumphantly bad because thoroughly bored; Millie, starving in a thriving community; and Bonny, whose schooling was less important than the strawberry patch.

The Behavior of Young Children. Series on Childhood Education, Book I. By ETHEL B. WARING and MARGUERITE WILKER. New York: Charles Scribner's Sons, 1929, pp. 121, $1.00.

Dressing, Toilet, Washing. Series on Childhood Education, Book II. By ETHEL B. WARING and MARGUERITE WILKER. New York: Charles Scribner's Sons, 1930, pp. 151, $1.00.

The initial volumes in a proposed series of handbooks for parents, the first dealing with eating and sleeping behavior. Material on the various topics is presented in the form of incidents illustrating the behavior of children, with suggestions for analyzing the incidents—a method which, it is hoped, will aid parents in analyzing the behavior of their own children. Brief bibliographical lists are included. Editor of the series is Patty Smith Hill.

The New Generation. Edited by V. F. CALVERTON and SAMUEL D. SCHMALHAUSEN. New York: The Macaulay Company, 1930, pp. 717, $5.00.

"The intimate problems of modern parents and children" discussed by thirty writers, several of them frequent contributors in such fields. The essays are grouped under the captions "Parents versus Children," "The Child versus Civilization," "The Family Romance," "Potentialities of the Child," and "Education and Enlightenment." A variety of points of view are represented, as may be seen by the following selection from the list of authors: Bertrand Russell, John Langdon-Davies, John B. Watson, Bronislaw Malinowski, Scott Nearing, Samuel D. Schmalhausen, T. Swann Harding, Sherwood Anderson, Lewis M. Terman, Sidonie Matsner Gruenberg, Havelock Ellis, Lorine Pruette, and Harry Elmer Barnes.

Our Wants and How They Are Satisfied. By MOLLIE RAY CARROLL. Boston: M. Barrows & Company, 1930, pp. 72, $1.00.

The principal facts about our present economic structure which a citizen needs for an understanding of current problems; stated simply and with careful avoidance of bias by a professor of economics and sociology at Goucher College. The general trend of the argument appears from the chapter heads: "The Production of Goods to Satisfy Wants," "What Wants Should Be Satisfied?," "Income to Satisfy Wants," "Money to Satisfy Wants," and "Social Control." Originally prepared for the National League of Women Voters, the discussion emphasizes the importance of consumption and points out the need for more investigation of this neglected phase of economics, a need made yet more apparent by the brief bibliography. A short study outline is included. A little book likely to prove useful, especially to intelligent women who wish to clarify their ideas as to the economic implications of civic and social questions.

Society and Its Problems. By GROVE SAMUEL DOW. Third edition revised. New York: Thomas Y. Crowell Company, 1929, pp. 707, $3.00.

"An introduction to the principles of sociology" by an associate professor in West Virginia University, intended pri-

marily for students, but useful also to community and philanthropic workers and to laymen wishing a clear, simple presentation of the main features of the subject.

A Point Scale of Performance Tests. Volume I, Clinical Manual. By GRACE ARTHUR. New York: The Commonwealth Fund, Division of Publications, 1930, pp. 82, $1.50.

A scale intended to meet the need for a non-verbal scale for use by adequately trained workers in psychological and psychiatric clinics, and including tests attractive to patients of all ages. Included in the present volume is only such material as will be of immediate use in routine psychological examination, the detailed account of the construction of the scale being reserved for a second volume.

Syllabus for a First Course in Vocational Education. By G. C. MANN. First edition. McGraw-Hill Book Company, Inc., 1930, pp. 120, $1.50.

"Thirty lessons designed to introduce students to a study of the objectives and problems of vocational education" by the director of vocational education in Berkeley, California. Intended for use with Lee's "Objectives and Problems of Vocational Education." Traces the history, national importance, and social implications of vocational education and takes up its various subdivisions, giving assignments to home economics.

Hospital Economics for Nurses. By PHOEBE MILLER KANDEL. New York: Harper & Brothers, 1930, pp. 279, $5.00.

A book on scientific housekeeping or house management for hospitals and similar institutions, intended for use in schools of nursing. Brings together into convenient form material on the different phases of the subject for which students have usually had to consult many scattered sources.

Aren't Men Rascals? By T. SWANN HARDING. New York: The Dial Press, 1930, pp. 202, $2.00.

Nonsense of a modern variety.

ABSTRACTS FROM PERIODICALS

CHILD DEVELOPMENT AND PARENTAL EDUCATION

EDUCATIONAL METHODS

Inter-relationships in the behavior of young children, FLORENCE L. GOODENOUGH. *Child Development* **1**, 29–47 (1930).

Report of observations made upon 33 nursery school children to develop a method whereby direct observations of specified modes of behavior might be reduced to quantitative expression on a uniformly graduated scale and to ascertain their correlations with each other and with such additional measures as might be available through other sources. The traits selected were physical activity, talkativeness, compliance, laughter, and social traits, including participation and leadership. Descriptive catagories for measuring each trait were devised; and 25 one-minute observations of each subject made by each observer on different days, never simultaneously, are tabulated and evaluated. The reliability of the combined ratings was found to be very high for all four traits; correlations are given and results discussed.

The Heilbronner test for preschool children, ROBERTA S. WHITE. *Child Development* **1**, 52–55 (1930).

A modification of this test, designed to measure imagination, is presented for use with preschool children, with the suggestion that although pictures of objects more familiar to children might be added and allowances made for language difficulties of children under 3½, and although more opportunity for manipulation is necessary to hold a child's attention, the test may be of definite value with older preschool children in measuring "imagination" or as one of a series of tests for that purpose.

Does general mechanical aptitude exist? HARRY D. KITSON. *Ind. Arts & Vocational Educ.* **19**, 215–219 (1930).

After a searching analysis of the literature, the author concludes that no satisfactory criterion of mechanical aptitude has been established and that this failure may be due to the fact that no such aptitude exists; that there is a positive relation between general intelligence and mechanical work; that the high or satisfactory correlations offered as a basis for claims for this attitude are open to serious criticism; and that progress in vocational guidance will benefit from abandonment of the mechanical aptitude concept.

The children's community, KATHERINE W. TAYLOR. *J. Am. Assoc'n Univ. Women* **23**, 215–217 (1930).

An account of the three years' experience of a nursery school organized by parents and successfully carried on after the first year with mothers "trained on the job" as teachers.

And what of leisure? HENRIETTA ADDITON. *J. Social Hygiene* **16**, 321–334 (1930).

An analysis of the findings of a study of the leisure time activities of 1,659 adolescent girls from poor, middle class, and prosperous families of various cultural and racial backgrounds in Brooklyn, shows that 42 per cent expressed leisure time preferences for educational, creative, or constructive activities, of which reading stood first; that 30.5 per cent preferred athletics or outdoor activities; and 27.5 per cent, general sociability and more passive amusements. The first group had opportunity to gratify their preferences, while only 40 per cent

of those who desired outdoor activities could so participate. Recreational preferences were little affected by economic or racial backgrounds. A need for more girls' clubs and for camp facilities is shown. Most of the girls studied attended church; 90 per cent spent time in home study; 98 per cent asked permission when they went from home; most went to bed at a reasonable hour and spent their money under parental guidance. In short, these girls appear to enjoy wholesome recreations and to respect family guidance.

Child guidance problems in rural and village communities, SANGER BROWN, II. *Psychiatric Quart.* **4,** 179–185 (1930).

A survey in New York State shows that facilities for special education, guidance, and supervision to meet children's needs are being developed in many districts but that child guidance clinics as diagnostic, therapeutic, and educational centers are lacking in rural districts. Traveling clinics which offer monthly service for all types of cases are useful but inadequate for genuine problem cases. A plan is suggested for establishing permanent clinics in populous communities which would serve the outlying districts.

Training of the mentally handicapped child, EUGENE W. MARTZ. *Psychiatric Quart.* **4,** 204–208 (1930).

Successful training of these children is based upon a study of their physical well-being, social adjustment, and psychological diagnosis. A study of 250 morons with behavior problems shows that 84 per cent spontaneously overcame their behavior difficulties when placed in schools designed for the mentally retarded, with marked improvement in school success. Such school curricula should provide individual instruction, short study periods, general muscular activity, much manual work, special sense training, with opportunity for pride in accomplishment and generous praise. In such specialized schools these children are happy, well cared for, better trained, and less prone to develop undesirable habits of conduct.

Child study program applied to a public health organization, FLORA F. STEWART. *Pub. Health Nurse* **22,** 297–300 (1930).

Through a development clinic, with detailed records of the child's growth and observation of home management and the child and through parent education groups in child study and health education, the Montreal Child Welfare Association has coordinated the experience of parents and public health nurses.

The nursery school—a learning-living place, WINIFRED RAND. *Pub. Health Nurse* **22,** 303–307 (1930).

The educational theory back of the nursery school and the need it fills in modern family life is sympathetically and convincingly presented.

MENTAL HYGIENE AND BEHAVIOR PROBLEMS

Understanding the adolescent, ESTHER L. RICHARDS. *J. Am. Assoc'n Univ. Women* **23,** 197–201 (1930).

A delightful demonstration of the way in which common sense as well as psychological principles may be applied to the parental understanding of adolescence. The rôle of environmental influence played by home and school is emphasized, together with the fact that the behavior problems which appear at this time have their roots in childhood mismanagement, though hope is held out that even a bad start may be overcome.

An adjustment survey, P. M. SYMONDS and C. E. JACKSON. *J. Educ. Research* **21,** 321–330 (1930).

A description and evaluation are given of two group tests, one of the questionnaire type, the other a rating device, designed to show the personality adjustments of high school students. The first attempts to measure the individual's satisfaction with school and home and is useful in bringing to light the seclusive, introverted pupil; the other reveals the boisterous, attention-seeking extrovert. Recognition of these maladjustments in the incipient form gives opportunity for effective corrective measures. The replies to the questionnaire are believed also to measure one aspect of teacher efficiency and of school morale.

Books suggested for a library pertaining to behavior problems of children, DAVID M. LEVY and MARY COBURN. *Mental Hygiene* **14,** 445–562 (1930).

Suggestions are given for a small clinical library in English to cost about $1,500, with certain titles starred to constitute a minimum list costing $300. A list of English and foreign language periodicals is appended.

Three behavior problems, ARTHUR PHILLIPS. *Psychol. Clinic* **19,** 83–95 (1930).

Three cases of intellectual retardation due to defective social control, are shown at different stages of the individual's development, namely, 3 years, 9 years, and 15 years. The common symptoms are fear, retardation of mental growth, and speech difficulties. Favorable prognosis depends upon establishing social control, in which cooperation is imperative. The importance of the child's early environment and of early correction of bad habits is forcibly illustrated by the work.

The public health nurse considers temper tantrums, RUTH B. FREEMAN. *Pub. Health Nurse* **22,** 301–302 (1930).

Analysis of the anti-social attitudes which lie behind temper tantrums, the satisfactions the child gains through them, and the logical and effective treatment—to ignore the performance.

The psychology of corporal punishment, WALTER R. SCHAFF. *School Executive Mag.* **49,** 369–371 (1930).

Summarizes the evils of corporal punishment and its effect upon personality development. While applied here to school situations, the same principle holds in home discipline.

The characteristics of disciplinary problem pupils in high school, C. T. COLEMAN. *School Rev.* **38,** 434–442 (1930).

A comparison of 125 problem pupils with a comparable non-problem group shows the former to be largely of American descent, three-fourths of them boys and about half freshmen, and indicates that while the groups were equal in intellectual ability, five sixths of the failures during the semester occurred in the problem group; that the latter appeared to lack certain fundamental qualities of character, namely, determination, promptness, trustworthiness, and sense of responsibility. That this was recognized by their fellow pupils is shown by the fact that few problem pupils were leaders in extra-curriculum activities, honorary societies, or athletic teams.

PHYSICAL DEVELOPMENT

The place of the preschool age in periodic health examination, JACOB SOBEL. *Arch. Pediatrics* **47,** 320–328 (1930).

The preschool age is held to be the pivotal point in community protection

because physical defects not corrected then may lay the foundation for adult diseases and because then habits and attitudes with regard to the periodic attention to be given health become fixed. The author holds that if a substantial part of the money now appropriated for the medical inspection and examination of school children were set aside for such use with preschool children, better and more lasting results would be obtained.

The mental organization of the newborn, PAUL H. FURFEY, M. A. BONHAM, and M. K. SARGENT. *Child Development* **1**, 48–51 (1930).

Sixty-two newborn infants were tested upon a scale involving 17 reactions to determine whether "general intelligence" is present at birth or acquired shortly afterward. The results presented show that the intercorrelations, when corrected, are zero, from which it is concluded that there is no mental integration in the newborn but that it takes place during the first postnatal month.

Variations in the responses of infants during first ten days of post-natal life, EDITH S. BRYAN. *Child Development* **1**, 56–77 (1930).

The factors present at birth and immediately following it which influence the reactions and behavior of infants, such as the condition of the mother prior to and during labor, the infant's reaction upon delivery and shortly afterward, and its reactions to definite stimuli administered under experimental conditions twice daily during the 10-day period were studied with 64 mothers and their 66 infants as subjects. Data with regard to the reactions to light, hearing, taste and smell, reflexes, cry, and muscular activity are given, which show that infants react strongly to light in the first 3 to 5 days, especially during sleep; that the eye does not follow light readily; that hearing is not usual though sometimes evidenced at from 3 to 9 days; that there is sensitiveness to strong odors and tastes but ready adaptation to distasteful stimuli; that the Babinski reflex is irregular and inconstant, that it usually appears within the first 10 days with white children but rarely in colored, and that it varies between waking and sleeping and is excited by other stimuli than stroking on the foot; that the cry varies in pitch, intensity, and continuity, and that while at first it is a reflex, it soon appears to be a learned reaction; that marked muscular activity and tension are present at birth and increase with age. Some purposeful lifting of the head was observed as was creeping in some infants and ability to stand alone in one.

Visual testing and eye inspection, MILDRED SMITH. *Child Health Bull.* **6**, 91–95 (1930).

It is shown that defects of vision have a very definite bearing upon general health; that reliable tests are available for preschool children; and that if a child shows variation from the normal in development or behavior, the eyes should be examined for infection and vision as an essential part of the health examination.

Scientific versus sentimental views of adolescence, FOWLER D. BROOKS. *J. Am. Assoc'n Univ. Women* **23**, 201–205 (1930).

Scientific evidence disproves many of the views widely expressed with regard to striking changes during adolescence and demonstrates that mental growth is continuous from childhood to adulthood, with its greatest accelerations before adolescence, and that the establishment

of puberty has no strong effect upon intelligence; that inconsistencies of behavior are no more characteristic of adolescence than of infancy or early adulthood; that it is not a constitutionally critical physical period; and that it brings no inherent character changes.

The most significant development incident to maturation are those of sex, independence, self assertion, and critical attitudes, but many behaviour patterns already established are not modified. Thus, "a wholesome, happy, well-ordered childhood is of inestimable value for a similar sort of adolescence."

Parent education and child health, SIDONIE M. GRUENBERG. *Pub. Health Nurse* **22,** 283–286 (1930).

By illustrations drawn from typical family situations the author shows that parents must be helped to approach the problem of the child's physical health through an understanding of the basic principles of physiology, psychology, and the intensive study of child behavior.

H. R. H.

ECONOMIC AND SOCIAL PROBLEMS

Am. J. Sociol. **35,** No. 6 (1930).

In accordance with the desire of the editors to assess the various significant social changes each year, this entire issue of the *Journal* is devoted to the discussion of developments in various fields of interest to sociologists. The following articles are of especial value to persons interested in problems of the family:

The family, ERNEST R. GROVES, 1017–1026.

Increasing interest in study of family problems is evidenced by new courses in universities, the large number of conferences on various phases of home life, and the growing number of research projects. Legislation enacted during the year has tended to advance the age of marriage for minors, to provide a period of three to five days between the application for and the issuance of a marriage license, and to protect the interests of children. The author lists the research projects concerning family life which are now in progress and the more important of the conferences on that subject held during the past year.

The status of women, CHASE GOING WOODHOUSE, 1091–1096.

The status of women in the field of education is shown by the following facts: In the secondary schools there are more girls than boys; in graduate schools more women than men are enrolled, but higher degrees are granted to only one woman to every two men. Many women feel that in certain fields of teaching their opportunities for advancement are fewer than those of men. The new Bennington College for Women plans to experiment with a type of education not based primarily upon that adopted by men's colleges and is, therefore, of interest. The number of women gainfully employed is increasing but they do not seem to be entering new occupations in large numbers. The number of women in responsible political positions is growing. Recent legislation is more favorable to the property rights of married women, notably the new inheritance law of New York.

The second industrial revolution and its significance. *Ann. Am. Acad. Pol. Soc. Science* **149,** No. 238 (1930).

In this issue an attempt is made to interpret facts concerning the effects of the Second Industrial Revolution (in which we are now living), to point out trends in social and economic development, and to suggest measures to prevent such serious maladjustments as followed the early changes due to the First Industrial Revolution. Articles are arranged in six groups: "The New Economic Order," "Recent Economic Changes and Their Meaning," "The Changing International Economic Order," "The Individual in the Second Industrial Revolution," "The Control of Our Economic Development," "Guiding the Development of the Future." Of special interest to those interested in economic and social problems of the family are the article by Howard T. Lewis on distribution and the one by E. W. Burgess on the new community and its future. In the latter article the author sets forth his belief that new inventions and the development of instruments of communication and transportation have had a greater effect upon the new community than has the machine at which man works. With the acceptance of urbanization, it is probable that there will be a continuation of trends toward increase in the ratio of married to single persons, toward smaller families, multiple dwell-

ings, an increase in hotel population, and in patronage of restaurants, with a decrease of all functions save the affectional in the home.

A sociological case study of farm families, DWIGHT SANDERSON and ROBERT G. FOSTER. *Family* **11**, No. 4, 107–114 (1930).

The authors give a brief description of an exploratory investigation designed to perfect a method for classifying families according to type. Relatively little has been done heretofore toward describing the various forms of internal family relationships which lead to different family structures. Eighty families were studied intensively. Observations were made as to the dominance or consensus in the family (whether male, female, or joint control), the subgroups, the work pattern (responsibilities carried by husband and wife singly and jointly), the leisure time activities, and the ritual patterns followed. The participation of members of the families in external community and social relations was also noted. This type of investigation presents great difficulties, yet it is believed that it will enable us to establish family types by means of which more can be learned as to what factors condition existing family structures and how the structural pattern affects the functioning of the family.

Trends in the distribution of meats, E. L. RHOADES. *J. Farm Econ.* **12**, 289–291 (1930).

Recent trends in meat distribution methods are believed by the author to show the following tendencies: improvement in refrigeration and other equipment in retail stores; greater standardization with more rigorous grading of car-lot loads; more packaging of meat products, as bacon; use of more fresh and less cured pork; increased chain-store retailing; more trucking; and fewer short-rail shipments. Packers are experimenting with sale of frosted meats. There is a halting tendency toward integration, some chain stores having added slaughtering plants or processing plants.

Modern tendencies in food distribution, V. H. PELZ. *J. Farm Econ.* **12**, 301–310 (1930).

In the opinion of the author, the formation of large-scale producing (selling) units and of large-scale distributing (buying) units, the need for protection of the public against the domination of these organizations, and the pressure of consumer demand for lower prices will tend to bring about changes in our food marketing system during the next few years. The formation of large-scale producing and selling units is seen in the encouragement of cooperative associations by the Federal Farm Board and in mergers among manufacturers such as General Foods and National Dairy Products. Chain stores, or large-scale distributing units, continue to grow. There is a tendency to develop food stores carrying all types of food products—bakery goods, meats, delicatessen items, fruits and vegetables, as well as groceries. This has led some chain stores to operate their own bakeries and to form amalgamations with manufacturing concerns. Probably the most interesting development in retail distribution is that of frosted foods, which may make profound changes in methods of retailing.

Changes in consumer demand that are significant to retail merchandising, PAUL H. NYSTROM. *Nat'l Retail Dry Goods Assoc'n Bull.* **12**, 127–130, 190 (1930).

While the emphasis in this analysis of the changes in the population, habits,

and standards of living of the American people is upon their effect on merchandising, the trend shown is of wider interest. With a rapid and continuous increase in our population, there has been a decrease of one-half in both the birth and death rates, with a resulting increase in the proportion of adults and older people in the population; home ownership has declined steadily, houses are smaller, apartment living and frequent moving have increased. Many traditional home occupations are being taken over by commercial agencies in spite of the check furnished by labor-saving devices. The smaller family and the pleasure philosophy of life have resulted in a higher material standard of living which has profoundly affected buying habits.

Standards of living and the American farm program, CARLE C. ZIMMERMAN. *Rural America* **8,** No. 5, 3–7 (1930).

According to the author, the problem of rural standards of living is far more than a problem of farm relief; it is the problem of the American standard of living. The farmer has made contributions to our American standard which we can ill afford to lose. Our standards of living are the result of two forms of behavior—consumption of material goods and the ideologies of non-material facts associated with any level of consumption. Undue development of one type of behavior ultimately will be at the expense of the other. Our urban expenditures have developed standards in terms of material values alone. Wasteful consumption of material goods or things to live *with* has led to neglect of things to live *by*. The farmer, however, has kept his faith in the value of non-material things. He has preserved a belief in the value of investments for the future as a part of his standard; he has preserved the church and a rather strict idea of morals and character; he has been willing to spend upon a large family rather than limiting the number of his children in order to have more to spend upon himself. The balance which he furnishes is essential if many valuable phases of the American standard are to be retained. If the farmers lose certain fundamentals of their cultural standards, the national standards of living may record a loss. Perhaps study of the situation may lead us to go even further than Professor Black, who recently suggested that the advantages of keeping a country rural to a certain degree are so important that the nation could afford to burden the city industries a little and subsidize rural life.

A study of 250 successful families, CHASE GOING WOODHOUSE. *Soc. Forces* **8,** No. 4, 511–532 (1930).

This investigation was undertaken by the author in order to provide information concerning the factors which are responsible for successful family life. The majority of such investigations heretofore have been concerned with families in financial or other difficulties. The families chosen as "successful" were those which developed individuals well adjusted in their personal lives and doing a good piece of work in their particular jobs. The questionnaire method was used in obtaining information. The group studied was largely made up of professional men and women. Three hundred forty-four individuals (including in some cases both husband and wife from the same family) answered questions concerning various phases of family life. The factors which seemed most important to these men and women were attitudes, personal traits, and relationships. Individuality of each member of the family was to be recognized and developed. Economic factors, social

training, and education were mentioned less frequently. Included were such other topics as training and experience which had proved helpful to husband or wife as preparation for marriage; objectives in married life; the influence of children, problems which had arisen; and factors making marriage successful, happy, and satisfactory. The study indicates the need for education for marriage since success seems to be closely related to ability to see a problem clearly and attack it objectively and scientifically.

Separate domicil for married women, S. P. BRECKINRIDGE. *Soc. Service Rev.* **4,** No. 1, 37–52 (1930).

Under the English common law, marriage gave the husband the right to determine where the family should live (domicil). This right has been modified by legislation in several states for two reasons: (1) to protect the family from arbitrary moving; (2) when husband and wife live apart, without discord, or maintain two separate establishments as a country and a town house, to enable each to choose a domicil for the purpose of performing civic duties, as voting. In addition, the courts have recognized the right of the wife to institute a separate domicil when there is discord and she is unable to live with her husband, or for the purpose of obtaining a divorce. However, what has not been recognized is the right of the wife to establish separate domicil when there is no discord but when circumstances make it advisable to her to live apart from her husband for long periods of time. Various questions are involved in giving her this right—taxation, the right of the foreign-born wife to immigrate, leaving her husband in their native country, the distribution of her property if she should die first, the employment of the wife in positions requiring domicil when her husband has his domicil elsewhere.

If there is to be legislation granting the wife the right to retain or establish domicil of her own, its trend and rate of progress should be directed by women.

Why do married women work? ELEANOR G. COIT and ELSIE D. HARPER. *Survey* **64,** 79–80 (1930).

The Industrial Department of the Y. W. C. A. has recently completed an investigation of gainfully employed married women in order better to adapt their educational program to these women's needs. Five hundred and nineteen married women from 66 cities were studied. Of these women, 71 per cent were living with their husbands, hence broken homes were not responsible for their employment. More than two-thirds of the women were in industry, the remainder being household employees or others whose earnings or interests were similar to those of the industrial women. Inadequacy of income of family, illness of husband, desire to educate children, and need for savings were the four most important reasons given by the women for their employment. Three hundred twenty-two did all of their household work in addition to their outside jobs while 140 reported some help from children, husbands, or women relatives. Although 276 said they had never intended to seek outside empoyment when they married, 182 accepted earning as a normal part of married life. The results of the investigation indicate that many married women are not free to choose whether they will earn or confine their energies to homemaking but are forced by financial necessity to seek employment, and perhaps thus carry a double job.

Rural and urban living standards, WILSON GEE and W. H. STAUFFER. *Univ. Va. Inst. Monograph* No. 6.

Of the 277 families included in this study, 140 were urban and 137 rural. When classified by economic status, more than half were in the intermediate income group: lower income group, 35 urban and 40 rural; intermediate income group, 78 urban and 85 rural; high income group, 27 urban and 12 rural. Family expenditures were the main index of the standard of living; but use of time, including leisure, the occupational status of children, and the formal education of parents and children were taken into consideration. Comparisons of urban and rural families of the same economic levels showed that the former were smaller, had more household conveniences, and spent more for newspapers, magazines, and books than did the latter. However, the farm families spent more time in reading than did the urban. Edith Hawley contributed the chapter in which the data concerning food consumption is analyzed.

The part-time job, LORINE PRUETTE. *Woman's J.* **15,** No. 6, 18, 19; 43-46 (1930).

The author finds evidence that part-time employment of married women is increasing. A growing number of employers are finding it advantageous to fit part-time workers into their offices or stores, especially when there is a peak-load time of day. A recent investigation by the Bureau of Women in Industry of New York showed 4,200 women employed for part time in 38 department stores in New York City. The Bureau of Part-Time Work organized in New York and in Philadelphia has helped to educate employers as to the possibilities of such working arrangements and to find jobs for women desiring them.

D. M.

FOOD AND NUTRITION

Contributed by the staff of the Food and Nutrition Division, Bureau of Home Economics, United States Department of Agriculture

Effect of ultra-violet irradiation on the magnesium content of rats receiving reflected sunlight and a uniform stock ration, J. S. McHargue and W. R. Roy. *Am. J. Physiol.* **92,** 651–655 (1930).

A study was made to determine whether a deficiency of ultra-violet irradiation was causing any appreciable effect upon the growth of stock rats. Half of two litters of 10 rats each were irradiated 3 minutes every other day (beginning at birth) for 3 weeks and then 5 minutes daily for 34 days, after which the animals were killed and chemical analyses made. The results showed that the live weight, dry weight, and ash were greater in the irradiated animals than in the non-irradiated. The calcium content of the leg bones of the irradiated animals was appreciably less, the phosphorus considerably less, and the magnesium only a little more than one-half as much as in the bones of the animals which were not irradiated. This striking difference in the magnesium content confirms the opinions expressed by other investigators who believe magnesium to be an important factor in the production of rickets. The authors conclude that "one of the beneficial effects of ultra-violet irradiation is the elimination of an excess of magnesium, thereby maintaining a proper balance between calcium, magnesium, and phosphorus in the metabolism of animals."—E. P. D.

Vitamin content of ethylene-treated and untreated tomatoes, D. Breese Jones and E. M. Nelson. *Am. J. Pub. Health* **20,** 387–394 (1930).

The use of ethylene gas for the forced coloration of certain fruits and vegetables prompted a study of the comparative vitamin value of tomatoes treated and untreated with ethylene gas and collected at different stages of development. The tomatoes used were from a pure-bred strain which were grown on the United States Department of Agriculture Experiment Farm at Arlington, Virginia, and of which certain lots were subjected to various kinds of gas treatment at various stages of development. After a series of carefully conducted feeding experiments, it was evident that naturally ripened tomatoes are a better source of vitamins A, B, and C than any of the others which were studied either treated or untreated. No material difference was observed in the vitamin A and B content of the green tomatoes picked at different stages of development, whether or not treated with ethylene. The vitamin C value of tomatoes, however, seems to increase as the fruit develops and approaches the mature condition by natural means. Ethylene gas treatment did not produce this vitamin C increase. No indication was observed, however, of any deleterious effect of the gas upon the vitamins already developed.—A. M. P.

The relative vitamin A value of the body and liver oils of certain fish, B. Ahmad and J. C. Drummond. *Biochem. J.* **24,** 27–36 (1930).

This work was undertaken to examine the claims of Schmidt Nielson that the antimony trichloride reaction is not specific for vitamin A. Six samples of fish body and liver oils have been examined both biologically and colorimetrically for vitamin A, and the results agree within reasonable limits, although the authors "make no claim that the color

reaction is specific." Disagreements in results are probably due to differences in technic and the low vitamin A content of the oils tested.—C. H. M.

Heat stability of the (anti-dermatitis, "anti-pellagra") water-soluble vitamin B_2, H. CHICK and M. H. ROSCOE. *Biochem. J.* **24,** 105–112 (1930).

The authors, using rats as test animals, investigated the stability to heat of vitamin B_2 under various conditions of acidity or alkalinity and found that, contrary to general assumption, vitamin B_2 is not completely thermostable when heated in acid or alkaline solution. At pH 3 to 5, B_2 is stable under heating for 2 hours at 90 to 100°C., but 50 per cent destroyed when autoclaved for 4 or 5 hours at 123°C. When the pH is raised to 8 or 10, 30 per cent of the B_2 present is destroyed in 10 days at room temperature; 50 per cent remains after heating for 2 hours at 98 to 100°C.; and 0 to 25 per cent is left after autoclaving 4 or 5 hours at 122 to 125°C. The authors suggest that discrepancies reported from many laboratories and the supposed existence of other members of the B complex beside B_1 and B_2 may be due to destruction of B_2 as indicated.—C. H. M.

Absorption spectra in relation to vitamin A, R. A. MORTON, I. M. HEILBRON, and F. S. SPRING. *Biochem. J.* **24,** 136–140 (1930).

The authors believe that they have disproved Rosenheim and Webster's claim that selective absorption in the ultra-violet (328 maximum) of liver oils in itself cannot be taken as a criterion of vitamin A. They have found that dehydroergosterol exhibits 4 narrow bands with about one-sixth the absorption of the constituent of the liver oils. This is contrary to Rosenheim and Webster's claim that inactive dehydroergosterol had the same absorption band as vitamin A of the liver oil.—C. H. M.

The antirachitic value of irradiated wheat, F. F. TISDALL and A. BROWN. *J. Am. Med. Assoc'n* **94,** 854-856 (1930).

The authors have tested the antirachitic potency of muffets and of cracked whole wheat or wheat germ (the two latter irradiated for 2 minutes at 10 inches from a lamp). Steenbock's rachitogenic ration 2965 or McCollum's rachitogenic diet 3143 was fed to rats, part of the corn in the former or the wheat in the latter being replaced by the supplement. In normal 8-weeks-old rats on a rachitic diet the blood phosphorus (organic) decreased from 6.5 mg. per 100 cc. to 1.5 mg. per 100 cc. and the percentage of ash in femur and tibia from 55 or 60 per cent to 33 per cent. The authors added graduated amounts of irradiated or non-irradiated supplements to the rachitic diet and found that the percentage of bone ash increased in proportion to the amount of irradiated supplement used, but that the blood phosphorus was about one-half that found in the rats fed non-irradiated food and exposed to sunshine. They point out that since many times more antirachitic vitamin is required for healing rickets than is necessary to prevent the disease, it is essential that preventive technic be employed. The value of irradiated cereals lies not merely in their antirachitic potency, which is very low, but in the fact that irradiation has changed them "from rickets-producing foods to rickets-preventing foods."—C. H. M.

Comparative value of viosterol and cod-liver oil as prophylactic antirachitic agents, A. G. DESANCTIS and J. D. CRAIG. *J. Am. Med. Assoc'n* **94,** 1285 (1930).

One hundred infants were each given 3

teaspoons daily of cod-liver oil having a potency of 1,400 to 1,700 Oslo rat units or 140 to 170 Steenbock units of vitamin D. Three of these showed undisputed evidence of clinical rickets at the end of the 3-month period. Of 123 infants given 10 drops of viosterol daily, representing 3,000 Oslo rat units or 300 Steenbock rat units, 29 showed undisputed evidence of rickets such as beading and grooving of ribs, craniotabes, epiphyseal enlargement, and spasmophilia. Since a "general statement can be made that from 25 to 30 per cent of children not receiving antirachitic agents develop clinical rickets," it is evident that "viosterol given in the dosage recommended at the present time by its various manufacturers is less efficacious in the prevention of rickets than cod-liver oil." It is the opinion of the authors that "rickets may be due to a deficiency not in vitamin D alone."—C. H. M.

Dietary requirements for fertility and lactation. XXII. Further studies of the rôle of milk fat in fertility and lactation. B. SURE. *J. Nut.* **2,** 485–489 (1930).

Continuing work reported previously (*Proc. Soc. Expt'l Biol. Med.* **27,** 148, 1929), the author, in experiments that included five generations of animals, demonstrates the effect on fertility, and particularly on lactation, of small additions of milk fat to rations that had already been shown to be satisfactory for growth in rats. The diet richest in butter fat produced optimum results in the number of both young born and those successfully weaned. Vitamin B was found one of the limiting factors in all of the milk diets which were studied from the standpoint of lactation.—H. B. K.

The comparative value of different food proteins for reproduction and lactation in the rat. I. Beef muscle, liver, and kidney, M. M. CLAYTON, *J. Nut.* **2,** 491–507 (1930).

"In this comparative study, beef round, liver, and kidney, in both cooked and raw forms, were fed to rats in order to determine the relative efficiency of these foods as sources of protein and accessories, primarily for reproduction and lactation." The author concluded that as a source of protein only kidney ranked first; liver, second; and muscle, last. When the proteins were fed at a 20 per cent level, "the vitamin E content of the dried meats was found to decrease in the following order: round, liver, kidney." In the raw state, the investigator found that beef round was not easily assimilated by the rats, but that both raw liver and kidney appeared to have a higher food value than when cooked. "Of the raw meat, kidney would seem to require the fewest supplements for successful reproduction and lactation."—H. B. K.

The chemistry of vitamin D, F. L. MACLEOD. *J. Nut.* **2,** 517–530 (1930).

A concise review of the literature on the chemistry of the antirachitic vitamin D, to which is appended a bibliography of 32 items.—H. B. K.

The permanence of vitamin A in cod-liver oil as shown by the colour test, NORMAN EVERS. *Quart. J. Pharm. & Pharmac.* **2,** 556–565 (1929).

A series of experiments was undertaken to discover the permanence of vitamin A in cod-liver oil both under conditions of ordinary storage and under abnormal conditions of light and oxidation. The determinations were based on the antimony trichloride color test. Cod-liver oil, when properly stored, was found to retain a considerable proportion of vitamin A activity for long periods—

up to 26 years. Light, especially sunlight, and oxidation destroy this activity very markedly. The destructive action of ultra-violet light on vitamin A appeared much less than sunlight. It was shown that the deteriorating effect of light could be considerably inhibited by using amber glass bottles.—A. M. P.

A study of the blacktongue preventive value of lard, salt pork, dried green peas, and canned haddock, J. GOLDBERGER, G. A. WHEELER, L. M. ROGERS, and W. H. SEBRELL. *U. S. Pub. Health Rep'ts* **45,** 1297–1308 (1930).

In view of the evidence that blacktongue of dogs and pellagra of man are analogous conditions, the success or failure of a given diet in preventing blacktongue is considered by these authors as a satisfactory basis for the evaluation of its pellagra-preventive value. Hence, a series of feeding experiments was made to test the blacktongue preventive value of pork lard, salt pork, canned haddock, and dried green peas. The results indicate that lard and salt pork are poor sources of blacktongue preventive. Canned haddock, when used in relatively large proportion, was found to prevent the clinical manifestations of blacktongue. Fifty per cent or more of the animals on the lard, salt pork, and haddock diets showed post-mortem evidence of fatty degeneration of the liver. Dried green peas also appeared to contain the blacktongue preventive, but in relatively small amount.—A. M. P.

The prevention of rickets, JANE DALE and I. G. PILMER. *Western Hospital & Nurses' Rev.* **14,** No. 5, 17–19, 51–52, 54 (1930).

The recognition of the high rate of incidence of rickets during the first year of life, even during the first and second months, prompted the author to make a careful review of the findings of leading investigators as regards factors responsible for the faulty mineral metabolism observed in rickets, and to discuss the value of the application of the known antirachitic factors to the pregnant woman as well as the resulting lowered rickets occurrence.—A. M. P.

Recent advances in nutrition, IRA A. MANVILLE. *Western Hospital & Nurses' Rev.* **14,** No. 5, 23–25, 42–43 (1930).

The author sums up the more recent findings of investigators in the field of nutrition and places special emphasis on the control of thyroid activity, pernicious anemia, calcium metabolism, and general growth and health through dietary measures. The underlying control factors and their interrelation with each other and with the normal oxidation processes of the body are clearly presented.—A. M. P.

HOUSEHOLD EQUIPMENT AND MANAGEMENT

A food preparation study, DOROTHY E. SHANK. *Am. Stove Company Bull.* No. 35, pp. 7 (1930).

Reports of two methods-of-work studies, the first showing a time saving of 18.6 per cent and less confusion and fatigue when all materials are collected before beginning to mix a cake; the other, the time saved as well as the freedom from supervision which result from oven-cooked meals. Both studies also show the advantage of thermostatic oven control.

Mass production and the modern house, LEWIS MUMFORD. *Arch. Record* **67,** Part 1, 13–20; Part 2, 110–116 (1930).

An interesting analysis of the housing problems of today, with the conclusion that "mass production which utilizes all the resources of community planning is capable of far greater and more numerous economies than mass production which only extends a little farther than our current factory technique."

Apartment design to meet family needs, ROBERT L. DAVISON. *Arch. Record* **67,** 267–285 (1930).

The necessary adaptations of housing to meet the social and economic changes which have transferred many household occupations to outside agencies and sent mothers into industry, are provided in the apartment house plans submitted here with the endorsement of authorities on recreation, education, home life, and care of infants and children. Sound-proof construction, separate entrances for children near which lockers are provided for skates, scooters, and other toys, meet the children's needs and the adults' objections to young tenants. A whole upper floor is given over to small nursery and kindergarten units, where maximum sunlight, air conditioning, roof playgrounds, wading pool, a diet kitchen, outdoor sleeping balconies, and individual cubicles provide children from 2 weeks to 6 years of age with day-time care, under trained nurses and teachers, according to approved standards. Play space for the 6- to 18-year olds is considered impracticable in connection with apartments and should be provided by schools and parks. Adult recreational facilities include social rooms for dancing, teas, theatricals, a swimming pool, space for such games of individual skill as handball, tennis, clock golf, croquet. Community maid service, cooked food, laundry, phone and receiving room, automatic elevators, central heat, radio equipment, garages, and much built-in equipment are specified.

Structural aluminum. *Arch. Record* **67,** 395 (1930).

While aluminum is not likely to replace structural steel for general building purposes, it may be used in some places to advantage because of its lightness and the fact that it does not require painting. It has about 2.32 times the strength of a steel beam of the same weight and costs 5 to 6 times as much per ton, which may be offset by reduction in dead weight of a building. It is much used now in window spandrels and window frames.

The demonstration health-house, Los Angeles, R. J. NEUTRA. *Arch. Record* **67,** 433–439 (1930).

Photographs and plans are given of a unique house built as the home of a very sociable family with educational interests and an active preference for the outdoors, with a non-profit-making, experimental, open-air school attached.

Glas als Baustoff [Glass as building material], ADOLF MEYER. *Bauwarte* **6,** 68–69 (1930).

A fundamental element in the new architectural movement is a new relation to light. A minimum of material with a maximum of effect is sought, and glass and iron are the most suitable materials for these purposes. Previously, glass was a subordinate element, but in modern architecture it determines largely the character of the building. Besides being used for walls, inside and outside, it is found in floors, floor moldings, window seats, etc. A new mixture of glass and concrete which is also being introduced is here described.

Panel warming, F. E. GIESECKE. *Domestic Eng.* **131,** No. 5, 47–50 (1930).

The old Roman method of heating by which heat of combustion was delivered to the masonry of the building rather than to the air within it, is being extensively revived in England under the name of panel warming. The heating elements are pipe manifolds of heat capacity proportioned to the room size, inclosed in concrete, and placed in floors, walls, or preferably ceilings, thus heating by radiation rather than by air convection currents. A warm water system with temperature of 110°F. at the outlet and 102°F. at the intake, with forced circulation, maintains the ceiling temperature at 100°F. or below. With ceilings at 80°F., the walls will be about 68°F. and the air 65°, with a greater feeling of comfort than with air at 70° and walls colder. The panels can also be used for cooling by connecting with refrigerator machines. Technical details of English installations are described, including that on the new British Embassy in Washington, the first important installation of such a system which has been made in this country.

The breaking point, *Electrical Merchandising* **43,** 80–81 (1930).

Eleven of the test machines used in the Electrical Testing Laboratories to determine the life and usefulness of heater plugs and cords are pictured and briefly explained.

Full-use electric home, E. R. ACKER. *Electrical World* **95,** 1158–1161 (1930).

A utility company outlines a plan by which they install "complete electric home equipment" for a fixed payment of $30 a month for five years, which covers amortization of appliances as well as operating current. The appliances are electric refrigerator, washing machine with ironer attachment, vacuum cleaner, range, water heater, coffee percolator, toaster, hand iron, and waffle iron.

Tysk akvisisjon for hjemmenes elektrifisering [German methods for promoting electrification of the homes]. *Elektroteknisk Tidsskrift* **43,** 10 (1930).

According to Swedish engineers who have been studying this subject in Germany, the most effective method for spreading information about the use of electricity in the home has been found to be the work of women consultants. These women are trained in elementary electrotechnic, nutrition, and sales methods. Knowledge of food preparation and a good appearance are regarded as essentials.

Die wärmetechnische Eintichtungen der Wohnhaussiedlung Neudorf [The heating plant of the residence colony, Neudorf], G. GIOVANNI. *Gesundheitsingenieur* **53,** 1–8 (1930).

A detailed and technical description of the heating system of an interesting real estate development which consists of a number of one to three-family houses arranged around a central building.

The latter is the only one with a chimney and contains the heating plant for all the buildings, the central laundry, garages with repair rooms, restaurant, assembly room, and shops.

Elektrische Heizung [Electric heating], M. DOTTINGER. *Gesundheitsingenieur* **53,** 194–195 (1930).

It is the writer's opinion that even in countries with abundant water power, like Switzerland and Norway, electric heating will not displace other forms but will be used mainly to supplement coal, particularly in spring and fall. His experience is that electric heating systems are less easily adjusted to sudden change in outside temperature than are coal furnaces.

Die Beispielwirtschaft [The "example" household], ELLI HEESE. *Haushalt und Wirtschaft* **5,** No. 6 (1930).

While scientific management in the home has become a slogan in Germany, there is evident need for tests of machines and methods, developed by technical experts and practically applicable in the home. Accordingly, the German Association of Rural Housewives League has equipped several "example" households—not "model" households, perfect according to modern principles but actual rural households in which every improvement within the means of this type of family is introduced—and arranged that the housewife in each shall keep certain records of their use for a year. This form of education has been found very effective in rural communities.

Der Kampf gegen die Ermüdung [The fight against fatigue], G. V. *Haushalt und Wirtschaft* **5,** No. 13 (1930).

More careful working methods are urged, and it is pointed out that the energy consumption in the three postures, sitting, standing, and bending while standing, corresponds to the relation between the figures 4, 12, and 55.

Zur Zweckmässigkeit der Fernheizwerke [The usefulness of long-distance heating plants]. *Haustechnische Rundschau* **35,** 98–99 (1930).

The methods for heating whole towns or part of them by means of central heating plants are discussed, with the conclusion that such systems are neither practical nor economical. The long pipes are expensive and hard to insulate, particularly in humid soil; the cost of heat to the householder is estimated to be 50 to 100 per cent higher than when individual furnaces are used.

Das Archiv für Hauswirtschaft in RKW [The home management archive in RKW]. *Hauswirtschaft* No. 2, Jan. (1930).

The plan for building up a collection of documents relating to home management, which has been undertaken by the German National Board for Scientific Management, is here shown by means of a detailed, classified list of the subjects covered. This library, which is free for reference or borrowing by interested persons in Germany, should be of great value to anyone wishing to study home management there.

An air conditioning engineer builds a home, ESTEN BOLLING. *Heating-Piping & Air Conditioning* **2,** 462–469 (1930).

After showing how the application of engineering principles has brought unusual comfort and convenience in his own home here pictured and described, the author imagines the suburban community of the future as developed by engineers rather than realtors, with

modern scientific conveniences made available by centralization of facilities. Thus, modest but scientifically designed homes would be constructed to minimize maintenance, emphasize "livability," with all mechanical necessities centralized in the community station which would provide air conditioning, hot and cold water, household refrigeration, gardening and landscaping advice and assistance, selective radio service, garage service, school bus service, road maintenance, and the rest, more effectively and economically than any single family could afford or achieve, yet leave the family independent and democratized.

Air infiltration through various types of wood frame construction, G. L. LARSON, D. W. NELSON, and C. BRAATZ. *Heating-Piping & Air Conditioning* **2,** 509–526 (1930).

A technical paper reporting tests pertaining to wood frame construction, with the conclusion that air infiltration through a frame wall construction containing building paper or plaster properly applied is negligibly small. Methods of application are described.

Kitchens in small dwellings, HUGO HÄRING. *Housing & Building*, Jan.-Feb., 21–30 (1930).

Detailed plans and photographs illustrate this discussion of the arrangement of equipment to insure convenience and efficiency in a small kitchen. The cupboard and shelf arrangements are particularly interesting. The suitable dimensions for a convenient kitchen to serve only for cooking in a small house are given as 4½ meters square.

Swedish kitchens, SVEN WALLANDER. *Housing & Building* Jan.-Feb., 31–34 (1930).

In the kitchen here described the furniture is built into the two long sides of the room, leaving the space about the window at the end free. Grouped together on one side are a pantry cupboard with outside ventilator, a table with cupboards for cooking utensils, gas stove, and sink. The opposite wall has a bench near the window, china cupboard, and broom closet. Photographs and details of construction are given.

Chemists discover new refrigerant. *Ice Refrigeration* **78,** 369 (1930).

A new refrigerant, non-toxic, non-inflammable, and with desirable engineering characteristics for refrigeration has recently been announced. It was developed not to replace sulfur dioxide and other refrigerants now in use but for cooling rooms, mines, submarines, etc. Commercial production is not held practicable for two years.

Daughters of Soviet Russia, ANNE O'H. MCCORMICK. *Independent Woman* **9,** 147–148, 184 (1930).

An interesting insight into a state where there is no emphasis on sex distinction, where all citizens are units in an economic system and valued according to their productive powers. While most Russian wives still do some housekeeping, the aim is for the ideal proletarian state where each individual will be engaged in some collective enterprise and all domestic service will be socialized or efficiently performed by public agencies for large groups of workers. Toward that end the new housing developments are based on collective living, more and more women are taken out of the kitchens, and the traditional ties that bind people to family and home are broken down. Factory nurseries, preschools, sanitoria, and summer camps take care of the children since motherhood is a

social function which, while giving certain protections and exemptions, does not for long relieve women from other work.

Organic fluorides as refrigerants, THOMAS MIDGLEY, JR., and A. L. HENNE. *Ind. & Eng. Chem.* **22,** 542–545 (1930).

Despite satisfactory engineering and thermodynamic properties, all previously used refrigerating agents have been either inflammable, toxic, or both. A new class of refrigerating agents, organic substances containing fluorine, some of them surprisingly non-toxic, are described and a method of correlating their properties presented. Of these, dichlorodifluoromethane is less toxic than carbon dioxide, as non-inflammable as carbon tetrachloride, and otherwise satisfactory. A method for its manufacture is described.

Radiant heat from radiant heaters and its measurement, F. E. VANDAVEER. *Ind. & Eng. Chem.* **22,** 596–600 (1930).

A technical paper on the measurement of radiant heat, which points out that room heaters of the radiant type are a logical source of the visible and short infra-red rays present in sunshine which are of definite biologic value and frequently insufficient in winter, especially in cities. By the improvement of the radiant efficiency of such heaters the value of the latter for heating and health may be greatly increased.

Household mechanical refrigeration, CAREY P. MCCORD. *J. Am. Med. Assoc'n* **94,** 1832–1838 (1930).

The Committee on Poisonous Gases of the American Medical Association makes this valuable preliminary estimate of the nature and extent of the dangers inherent in the types of mechanical refrigeration operated by gas, electricity, or kerosene. Following a discussion of refrigerating systems and of refrigerants in common use, it concludes that mechanical household refrigeration should be developed but that greater precautions are necessary here than in industrial installations; that in multiple installations in large buildings the maximum gas which can be discharged in one apartment must be less than the lowest toxic concentration; that it is not desirable to add warming agents to refrigerants; that safety codes should be coordinated under the United States Public Health Service; that manufacturers should be held responsible for adequate testing and installation of equipment before offering it to the public; that medical and chemical data are available to safeguard installations such as caused recent deaths from methyl chloride; that investigations to develop a practical non-toxic refrigerant be pushed; and that federal protection such as now covers foods and drugs be extended to harmful substances outside that field.

The prevention of hazards in domestic refrigeration and first aid after accidents, W. A. EVANS. *Nat'l Safety Council Trans.* **2,** 710–716 (1929).

The hazards in this field are danger of poisoning, of explosion, and of fire, each of which is discussed in detail, with methods of prevention, a proposed city ordinance, and directions for first aid.

How should home accident rates be computed? E. S. FALLOW. *Nat'l Safety Council Trans.* **3,** 208–212 (1929).

A paper showing the importance of home accidents, which in one year caused as many fatalities as industry and one-fourth of the total accidental fatalities. Two tables are given, one, an analysis of of how home accidents occur, indicating the innumerable hazards an ordinary

home shelters; and the second, showing the types of injuries received, and the numerous ways in which people suffer as a result of home accidents. A method by which reliable statistics with regard to home accidents may be collected is considered desirable.

Making household equipment safe to use, KATHERINE A. FISHER. *Nat'l Safety Council Trans.* **3,** 300–306 (1929).

A discussion of the hazards involved in household appliances and equipment and the importance of proper education, first as to where the hazard lies in doing a particular thing; and, second, the way to avoid this hazard.

What shall the refrigerator buyer be told? HARRY D. EDWARDS. *Refrigerating Eng.* **19,** 139–140, 154 (1930).

The refrigerating industries, refrigerating engineers, and consumers should be interested in the selection of the code to be adopted as the basis for rating refrigerators. Two are under consideration by the American Society of Refrigerating Engineers, the "A. S. R. E." code which uses the three factors of daily ice consumption, temperatures affected (under uneven icing), and difference between highest and lowest temperatures in the food chamber, under the usual household conditions; and the "New York" code, by which the ratings are based on icing conditions kept as nearly ideal as possible, and which gives more uniform results and better individual ratings. The question seems to be whether the results of a laboratory or manufacturers' test on refrigerator performance should be such that when used as selling data they will reveal to the purchaser what one may later expect the refrigerator to do.

Refrigeration's next ten years, S. C. BLOOM. *Refrigerating Eng.* **19,** 141–142, 157 (1930).

Interesting predictions concerning trends of practice affecting refrigerants, refrigerating machines, ice, and refrigerators.

Solid CO_2 as a refrigerant, F. W. ROBE. *Refrigerating Eng.* **19,** 143–145 (1930).

The results of laboratory studies of the relative value of solid carbon dioxide and water ice under various conditions of use are discussed.

Hauswirtschaftlicher Lehrdienst [Educational service in home management]. *RKW Nachrichten* **4,** 23 (1930).

The German National Board for Scientific Management announces the first two lectures in a series dealing with technical problems of the home. The subjects are: "Recommendations and Hints Regarding the Selection of Cooking Utensils and Accessories" and "House Work Made Easy." The lectures are accompanied by slides.

Waschversuche [Laundering tests]. *RKW Nachrichten* **4,** 152 (1930).

The first series of these tests, made under the auspices of the German National Board for Scientific Management, is now completed. The results indicate that the various mechanical methods investigated (washing by hand or by machine, etc.), showed little difference in their influence on the strength of the textile fibers, which were more affected by the washing agents used. The tests are now being continued with water of different degrees of hardness; special consideration is paid to the increased ash content of linen washed in hard water and to the gray color of the materials generally observed under such circumstances.

Ice wells for farm refrigeration, A. L. WATT. *U. S. Daily* **4,** 3290 (1930).

A unique method of refrigeration demonstrated in North Dakota through the summer of 1929, made use of a pit dug in a well-drained spot near the milk house; it was 8 feet square and 9½ feet deep; the bottom was covered with 1½ feet of coarse gravel, over which a small house was erected, the sides boarded with cheap lumber. In this a solid cake of ice had been built up in the winter by throwing a small quantity of water into the pit several times a day during freezing weather. A cake 8 feet square and 6½ feet thick was formed in two months. Two thicknesses of 1-inch flooring with 3 thicknesses of building paper between were used to cover the ice; a wooden rack with overhead pulley was used to lower cans of cream and other food to be stored. Temperatures from 32° to 50°F. were obtained in the pit, with an average mean outside temperature of 70°F. and a maximum of 106°F., during the period of use from June through September.

The domestic oil burner, ARTHUR H. SENNER. *U. S. Dep't. Agr. Circular* 405, pp. 29 (Revised 1930).

An exhaustive study of oil fuels and their utilization for purposes of house-heating. Several types of burners which offer good combustion without giving off soot or smoke or requiring a great excess of air and which show no material differences in efficiency, are discussed. This method of heating offers convenience and ease of heat control at a somewhat increased cost of operation.

Ein neuer Werkstoff [A new building material]. *VDI Nachrichten* **10,** No. 6, 4 (1930).

The Kaiser-Wilhelm-Institut in Düsseldorf has developed a method for "metalizing" wood, whereby a product is produced which to some extent combines the characteristics of both wood and metal. It is, for instance, not easily inflammable. A wide use is foreseen for it, including its application in interior decoration.

The workable kitchen, DORCAS BOARDMAN. *Woman's J.* **15,** 32–34 (1930).

Scientific routing of kitchen processes provides: (1) the "forward march" principle, by which supplies enter by the tradesmen's door, are stored, prepared, cooked, and served without retracing steps; (2) division of space into three units, for raw materials, for cooking, and for serving; (3) arrangement of all equipment, fixtures, and utensils in relation to each other and to the work to be done; (4) complete girdling of the walls with supplementary equipment; (5) duplication of tools and supplies wherever they are to be used in separate places. New equipment must be shown to clean easily, wear well, and do what it is built to do. Correct dimensions for an average kitchen are 8 to 10 feet wide and 16 to 20 feet long; lights should be of daylight type, placed in the ceiling a short distance out from the wall at the left end of each unit of work; genuine rubber flooring is recommended.

H. R. H.
M. C. H.

MISCELLANY

Biennial Survey of Education. "Statistical Summary of Education, 1927–1928" by Frank M. Phillips consists of advance sheets from the survey issued as United States Department of the Interior, Office of Education, Bulletin, 1930, No. 3. Figures of special interest to home economics are those for the enrollment of high school students in that subject. These were 33,866 or 4.14 per cent of the total enrollment in 1910; 163,826 or 12.69 per cent in 1915; 321,136 or 13.75 per cent in 1922; and 449,835 or 14.30 per cent in 1928. Further statistics of home economics in the schools are found in another bulletin of the same series, Bulletin, 1930, No. 5, "Statistics of State School Systems, 1927–1928."

National Advisory Committee on Education. The organization and work of this committee were described by Dr. Henry Suzzallo in an address delivered before the American Council on Education at its annual meeting in May and printed in the *Educational Record* for July, 1930.

Meat Grading. "Market Classes and Grades of Dressed Veal and Calf Carcasses" is the title of a bulletin by W. C. Davis and C. M. Harris of the Bureau of Agricultural Economics, which is issued as United States Department of Agriculture Circular No. 103, and sold by the Superintendent of Documents for 25 cents a copy.

Louisville Grocery Survey. Part I of the reports of the survey of groceries in Louisville, undertaken by the United States Department of Commerce in cooperation with the Allied Food Committee of the Retail Grocers' Association of Louisville, has been issued by the Bureau of Foreign and Domestic Commerce as Distribution Cost Studies, No. 6. It includes the census of food distribution and includes 2,972 retail and 157 wholesale establishments and shows interesting facts regarding food consumption and methods of distribution and sale. The bulletin may be purchased from the Superintendent of Documents, Washington, D. C., for 15 cents a copy.

Home Improvement Enterprise. Instructions and record blanks for a girls' club demonstration on "The Spic and Span Girl's Room" are given in the 4-H handbook recently issued as Bulletin No. 65 from the University of Nevada, Agricultural Extension Division, Reno. The material was prepared by Orpha A. Miller.

Endemic Goiter. The careful study of endemic goiter carried on by the United States Public Health Service since 1923 is summarized by Robert Olesen in a bulletin of this title issued by the United States Treasury Department as Public Health Bulletin No. 192. Copies may be purchased from the Superintendent of Documents, Washington, D. C., for 35 cents each.

Aims and Methods in Parent Education. Helen Bott, Nellie Chant, and Lily Johnson of St. George's School for Child Study, University of Toronto, are the authors of a bulletin with this title, recently issued by the National Council of Parent Education, 60 East 42nd Street, New York City.

School Lunches in Massachusetts. "Food Service in Massachusetts Rural Elementary Schools" by Esther Davies,

issued in April as Bulletin No. 263 of the Massachusetts Agricultural Experiment Station, reports a survey of conditions in Massachusetts schools and gives suggestions for such service.

Housing in New York State. Students of housing will be interested in the recent report of the New York State Board of Housing and particularly in its account of constructions being carried on under the present law by limited dividend companies and near New York City. It is issued as Legislative Document (1930), No. 84.

Household Linen Service. Just as commercial concerns have for some years been supplying towels, aprons, and uniforms to offices, stores, factories, and other establishments, so, says a press release from the Cotton Textile Institute, "distributors of household linen supplies in some of our larger cities are specializing in a new form of service which enables a couple to set up housekeeping even without an extensive supply of such familiar household textiles as sheets, towels, etc. . . . In fact, the limitations of small apartment living with a minimum of closet space in some instances are conducive to such service."

Half a Century of Educational Publishing. In celebration of its fifty years of publishing, the Educational Department of Houghton Mifflin Company has issued an attractive booklet which includes interesting facts and figures regarding schools and textbooks in general. For example, one graph shows that between 1913 and 1928, the net sales of textbooks for public school use increased 49 per cent; the salaries of teachers and administrators, 205 per cent; and the cost of grounds, buildings, and contents, 258 per cent.

Radio in Education. The first year's work of the Ohio School of the Air, organized by the state department of education in the fall of 1928, occupies the greater part of a pamphlet by Armstrong Perry, which the Payne Fund, One Madison Avenue, New York City, has recently issued. Included also are accounts of earlier experiments in the use of radio in education, the Payne Fund's efforts to encourage national educational broadcasts for youth, the radio education conference called by the Secretary of the Interior, and other recent efforts in the same direction.

Silk Stockings and Working Conditions. A list of thirty-odd brands of full-fashioned silk hosiery made under conditions agreed to between the manufacturers and the American Federation of Full-Fashioned Hosiery Workers has been drawn up and will be welcomed by consumers who prefer to buy goods made under conditions which permit decent standards of life and tend to better industrial relations. Copies may be obtained from the Federation, 2530 North Fourth Street, Philadelphia.

National Better Business Bureau. The name of a company and its product against which the Bureau has recently issued warnings are amusing: the Academic Distributing Company, which advertises to cure varicose veins and unshapely ankles by the use of its "Academic Stocking, invisible under the sheerest chiffon hose." (We trust that the learning of JOURNAL readers has not gone to their legs enough for them to need this *caveat emptor*.)

Fire Prevention. "Safeguarding the Nation against Fire," a fire prevention manual for high schools recently issued by the National Board of Fire Under-

writers, brings together practical information on the common causes of fires, means of prevention and fighting, and figures on losses occasioned by them.

Leisure in Rural South Carolina. An interesting sign of the times is the report of a study of "The Use of Leisure in Selected Rural Areas of South Carolina" by Mary E. Frayser, which has recently been issued as Bulletin 263 of South Carolina Agricultural Experiment Station of Clemson Agricultural College. Of special interest to home economists will be sections on the relation of household equipment to leisure.

Nurses' Costumes. Students of costume may be interested in the picture showing costumes of nurses from the time of Florence Nightingale to the present which appears on page 33 of *Hospital Management* for June 15. It represents a scene from a pageant given at St. Catherine's Hospital, East Chicago, Indiana.

Artificial Fibers. A name for artificial textile fibers was the subject of a recent conference of the National Fascist Federation of Artificial Textile Fibers in Italy, says *The Silkworm* for June, 1930. Two requirements were that the word be usable in other languages and that it have no reference to silk. "Neofil" was chosen from eight hundred words recommended.

United States Bureau of Home Economics. The Bureau has moved to the Earle Building, corner of 13th and E Streets, N. W. Its former quarters are being demolished to make way for a parkway between the Station and the Capitol.

OUR CONTRIBUTORS

CARLETON WASHBURNE comes of a Chicago family intimately connected with progressive movements in education. After preparing to enter the medical profession, he shifted to education, worked out individual teaching methods in California rural schools, developed similar work in the San Francisco Normal School, and took a doctorate in education at Leland Stanford. About ten years ago he was called back to Illinois to be superintendent of schools in Winnetka, where his work has received national recognition. MRS. ROSE H. ALSCHULER, who organized and is now staff director of the Winnetka nursery school unit, is widely known for her active work and generous support for public nursery schools in and around Chicago. She is also secretary of the National Committee on Nursery Schools.

LUCY A. CASE was born and educated in Wisconsin, with further study at Columbia University and the University of Minnesota. After teaching a while in public high schools, she has for eight years been an extension specialist in nutrition, first in Wisconsin and since 1924 in Oregon.

EPHRAIM FREEDMAN, a graduate pharmacist and food and drug analyst of Columbia University, was in commercial chemical work from 1911 to 1927, except for two years' war service in the Sanitary Corps of the United States Army. For the last three years he has been director of Macy's Bureau of Standards, incidentally serving also as chairman of the Laboratory Research and Definitions Mattress Advisory Committee, New York State Department of Labor.

MAUD WILSON comes from Nebraska, having graduated from its University, taught in rural and high schools and at the University, and been for three years in charge of home economics extension in that state. From 1918 to 1925 she was in the state of Washington, first as state home demonstration leader and later as assistant director of the extension service. Since 1925 she has been in home economics research work at the Oregon Experiment Station. She has several times interrupted her regular work for advanced study at Teachers College, Columbia University, and the University of Chicago.

ANNA E. RICHARDSON was a contributor to the August JOURNAL.

CLARE SOPER left the Government Service in London to cooperate with Mrs. Beatrice Ensor in organizing the New Education Fellowship, of which she is now international secretary. She was for some years subeditor of the *New Era*, has assisted in the organization of the international conferences called by the Fellowship, and has this year spent several months in the United States organizing its work here.

ELIZABETH W. BURBANK is a Minnesotan who took her B. A. from the University of Minnesota, did teacher training in its extension department, and later taught and organized work in the vocational schools in Minneapolis and Grand Rapids, Michigan. Since 1922 she has been with the David Hale Fanning Trade School for Girls in Worcester, Massachusetts, and is now its director.

ALICE F. BLOOD, a former president of the American Home Economics Association, needs no introduction to most JOURNAL readers. For those who have missed the pleasure of knowing her and her work, suffice it to say that she is a graduate of Massachusetts Institute of Technology with a Ph.D. from Yale University and is widely known as head of the home economics department at Simmons College.

HELEN GOODRICH BUTTRICK was before her marriage a teacher of clothing and is the author of the well-known "Principles of Clothing Selection." Her visit to Algeria last spring was made with her husband, professor in the Yale School of Forestry, who is now studying the cork resources of the Mediterranian basin.

JENNIE TILT holds the bachelor's and master's degree from Purdue University and that of doctor of philosophy from the University of Chicago. After teaching chemistry at Wellesley and Barnard and experience in commercial laboratories, she went in 1923 to the State College for Women, where she is now professor in charge of the nutrition research laboratory, School of Home Economics. REBECCA B. HUBBELL, a graduate of Mt. Holyoke, took her doctor's degree under Dr. Mendel at Yale. She was for three years professor of nutrition at Florida State College for Women, and is now research associate in physiological chemistry at the University of Michigan. LOIS INMAN was research assistant at Florida State College for Women when the work here reported was underway, and is now laboratory assistant to Dr. Lester H Dragstedt, University of Chicago.

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Field Worker in Child Development and Parental Education, ANNA E. RICHARDSON, 617 Mills Building, Washington, D.C.